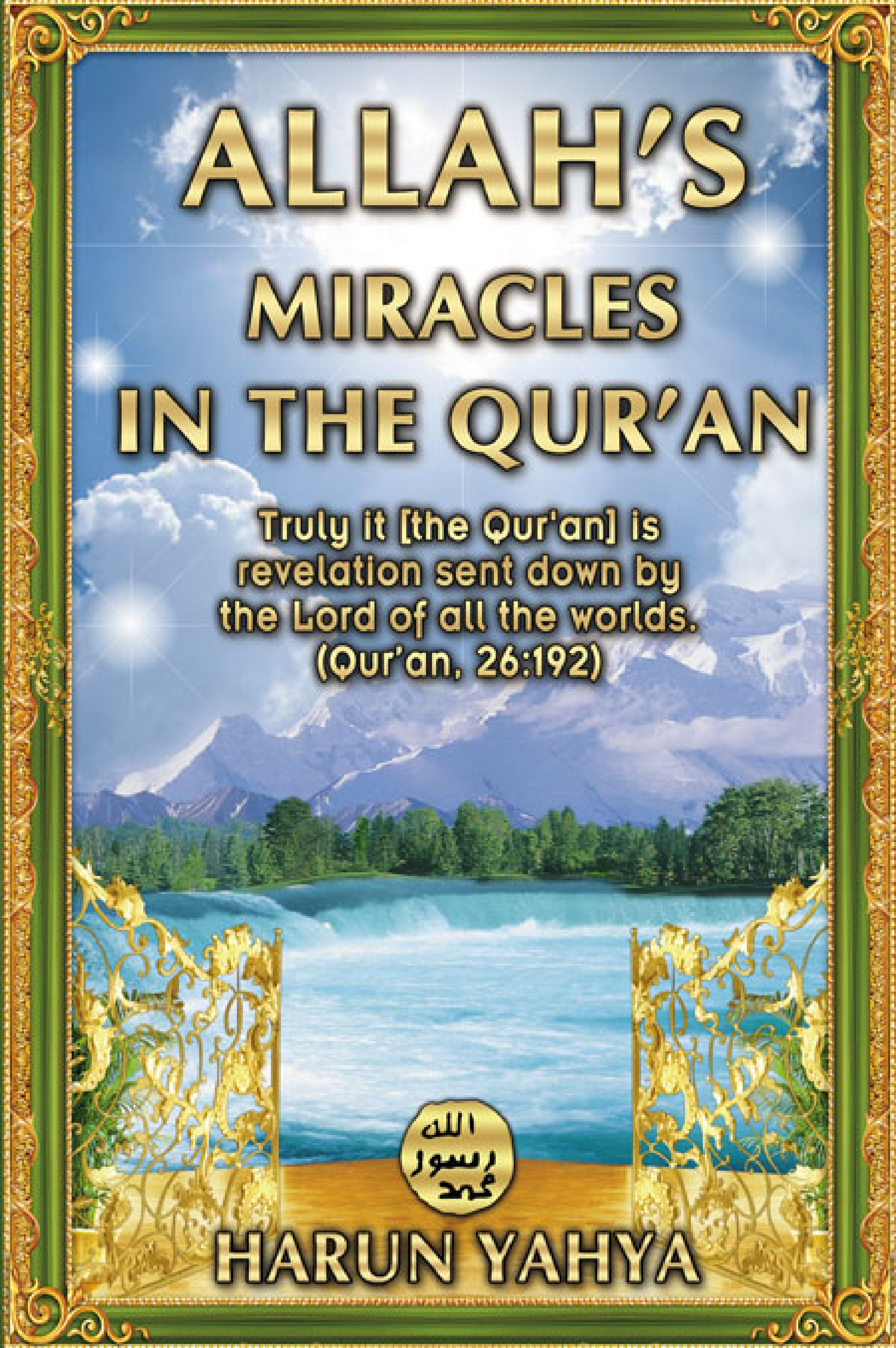

ALLAH'S
MIRACLES
IN THE QUR'AN
Truly it [the Qur'an] is
revelation sent down by
the Lord of all the worlds.
(Qur'an, 26:192)
HARUN YAHYA

Fourteen centuries ago, Allah sent down the Qur'an. This book of guidance and wisdom calls man to the truth and instructs all human beings to adhere to the values which this mighty revelation contains. From the day of its revelation to the Day of Judgement, the Qur'an, the last Divine book, will remain as the sole guide for humanity.

The perfection of the literary language of the Qur'an, the incomparable features of its style and the superior wisdom contained within it are some of the definitive proofs that it represents the word of our Lord.

In addition, the Qur'an contains within its words many miracles which prove it to be Allah's word. One of these attributes is the remarkable number of scientific truths which are contained in it. In this book which was revealed over fourteen centuries ago to Prophet Muhammad (saas), there are innumerable examples of information humanity have only been able to uncover by the technology of the 20th and 21st centuries.

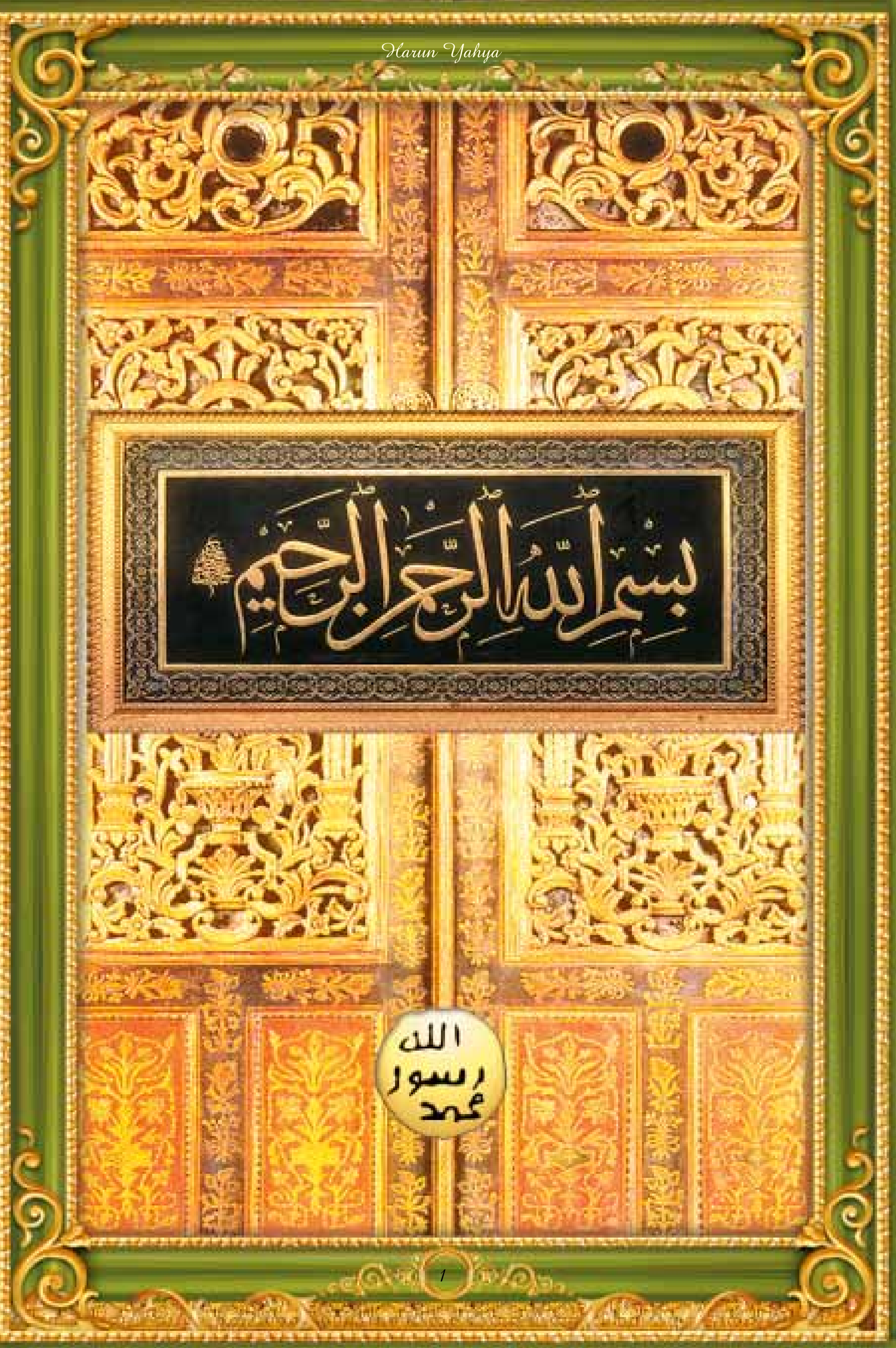
Of course, we should not view the Qur'an as a book of science. However, many scientific facts that are expressed in an extremely concise and profound manner in the verses of the Qur'an have only been discovered by scientists with the aid of the technological advancement of the 20th and 21st centuries. Additional discoveries to these are being made every day. Quite simply, these facts which are now pointed out to the reader could not have been known at the time of the Qur'an's revelation, and this demonstrates that it is the word of Allah.

In addition to the scientific miracles of the Qur'an, this book you are holding also contains examples of reports regarding the past and the future, its perfection from the literary aspect and mathematical miracles in it.

About the Author



The author, who writes under the pen-name Harun Yahya, was born in Ankara in 1956. He studied arts at Istanbul's Mimar Sinan University, and philosophy at Istanbul University. Since the 1980s, the author has published many books on political, faith-related and scientific issues. Greatly appreciated all around the world, these works have been instrumental in helping many to return their faith in Allah, and, in many others, to gain a deeper insight into their faith. Harun Yahya's books appeal to all kinds of readers, regardless of their age, race, or nationality, for they focus on one objective: to broaden the readers' perspective by encouraging them to think about a number of critical issues, such as the existence of Allah and His unity, and to live by the values He prescribed for them.


بسم الله الرحمن الرحيم
الله
رسول
محمد

TO THE READER

A special chapter is assigned to the collapse of the theory of evolution because this theory constitutes the basis of all anti-spiritual philosophies. Since Darwinism rejects the fact of creation-and therefore, Allah's existence-over the last 140 years it has caused many people to abandon their faith or fall into doubt. It is therefore an imperative service, a very important duty to show everyone that this theory is a deception. Since some readers may find the chance to read only one of our books, we think it appropriate to devote a chapter to summarize this subject.

All the author's books explain faith-related issues in light of Qur'anic verses, and invite readers to learn Allah's words and to live by them. All the subjects concerning Allah's verses are explained so as to leave no doubt or room for questions in the reader's mind. The books' sincere, plain, and fluent style ensures that everyone of every age and from every social group can easily understand them. Thanks to their effective, lucid narrative, they can be read at one sitting. Even those who rigorously reject spirituality are influenced by the facts these books document and cannot refute the truthfulness of their contents.

This and all the other books by the author can be read individually, or discussed in a group. Readers eager to profit from the books will find discussion very useful, letting them relate their reflections and experiences to one another.

In addition, it will be a great service to Islam to contribute to the publication and reading of these books, written solely for the pleasure of Allah. The author's books are all extremely convincing. For this reason, to communicate true religion to others, one of the most effective methods is encouraging them to read these books.

We hope the reader will look through the reviews of his other books at the back of this book. His rich source material on faith-related issues is very useful, and a pleasure to read.

In these books, unlike some other books, you will not find the author's personal views, explanations based on dubious sources, styles that are unobservant of the respect and reverence due to sacred subjects, nor hopeless, pessimistic arguments that create doubts in the mind and deviations in the heart.



ALLAH'S MIRACLES IN THE QUR'AN

Truly it [the Qur'an] is revelation sent down by the Lord of all the worlds. (Qur'an, 26:192)

HARUN YAHYA

JANE 2005



ABOUT THE AUTHOR

Now writing under the pen-name of HARUN YAHYA, he was born in Ankara in 1956. Having completed his primary and secondary education in Ankara, he studied arts at Istanbul's Mimar Sinan University and philosophy at Istanbul University. Since the 1980s, he has published many books on political, scientific, and faith-related issues. Harun Yahya is well-known as the author of important works disclosing the imposture of evolutionists, their invalid claims, and the dark liaisons between Darwinism and such bloody ideologies as fascism and communism.

His pen-name is a composite of the names Harun (*Aaron*) and Yahya (*John*), in memory of the two esteemed Prophets who fought against their people's lack of faith. The Prophet's seal on his books' covers is symbolic and is linked to their contents. It represents the Qur'an (the Final Scripture) and Prophet Muhammad (saas), last of the prophets. Under the guidance of the Qur'an and the Sunnah (teachings of the Prophet [saas]), the author makes it his purpose to disprove each fundamental tenet of godless ideologies and to have the "last word," so as to completely silence the objections raised against religion. He uses the seal of the final Prophet (saas), who attained ultimate wisdom and moral perfection, as a sign of his intention to offer the last word.

All of Harun Yahya's works share one single goal: to convey the Qur'an's message, encourage readers to consider basic faith-related issues such as Allah's existence and unity and the Hereafter; and to expose godless systems' feeble foundations and perverted ideologies.

Harun Yahya enjoys a wide readership in many countries, from India to America, England to Indonesia, Poland to Bosnia, and Spain to Brazil. Some of his books are available in English, French, German, Spanish, Italian, Portuguese, Urdu, Arabic, Albanian, Russian, Serbo-Croat (Bosnian), Polish, Malay, Uygur Turkish, and Indonesian.

Greatly appreciated all around the world, these works have been instrumental in many people recovering faith in Allah and gaining deeper insights into their faith. His books' wisdom and sincerity, together with a distinct style that's easy to understand, directly affect anyone who reads them. Those who

seriously consider these books, can no longer advocate atheism or any other perverted ideology or materialistic philosophy, since these books are characterized by rapid effectiveness, definite results, and irrefutability. Even if they continue to do so, it will be only a sentimental insistence, since these books refute such ideologies from their very foundations. All contemporary movements of denial are now ideologically defeated, thanks to the books written by Harun Yahya.

This is no doubt a result of the Qur'an's wisdom and lucidity. The author modestly intends to serve as a means in humanity's search for Allah's right path. No material gain is sought in the publication of these works.

Those who encourage others to read these books, to open their minds and hearts and guide them to become more devoted servants of Allah, render an invaluable service.

Meanwhile, it would only be a waste of time and energy to propagate other books that create confusion in people's minds, lead them into ideological chaos, and that clearly have no strong and precise effects in removing the doubts in people's hearts, as also verified from previous experience. It is impossible for books devised to emphasize the author's literary power rather than the noble goal of saving people from loss of faith, to have such a great effect. Those who doubt this can readily see that the sole aim of Harun Yahya's books is to overcome disbelief and to disseminate the Qur'an's moral values. The success and impact of this service are manifested in the readers' conviction.

One point should be kept in mind: The main reason for the continuing cruelty, conflict, and other ordeals endured by the vast majority of people is the ideological prevalence of disbelief. This can be ended only with the ideological defeat of disbelief and by conveying the wonders of creation and Qur'anic morality so that people can live by it. Considering the state of the world today, leading into a downward spiral of violence, corruption and conflict, clearly this service must be provided speedily and effectively, or it may be too late.

In this effort, the books of Harun Yahya assume a leading role. By the will of Allah, these books will be a means through which people in the twenty-first century will attain the peace, justice, and happiness promised in the Qur'an.

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(saas - sall-Allahu 'alyahi wa sallam): May Allah bless him and grant him peace (following a reference to Prophet Muhammad)
(as - 'alayhi's-salam): Peace be upon him (following a reference to the prophets)

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ALLAH'S MIRACLES IN THE QUR'AN

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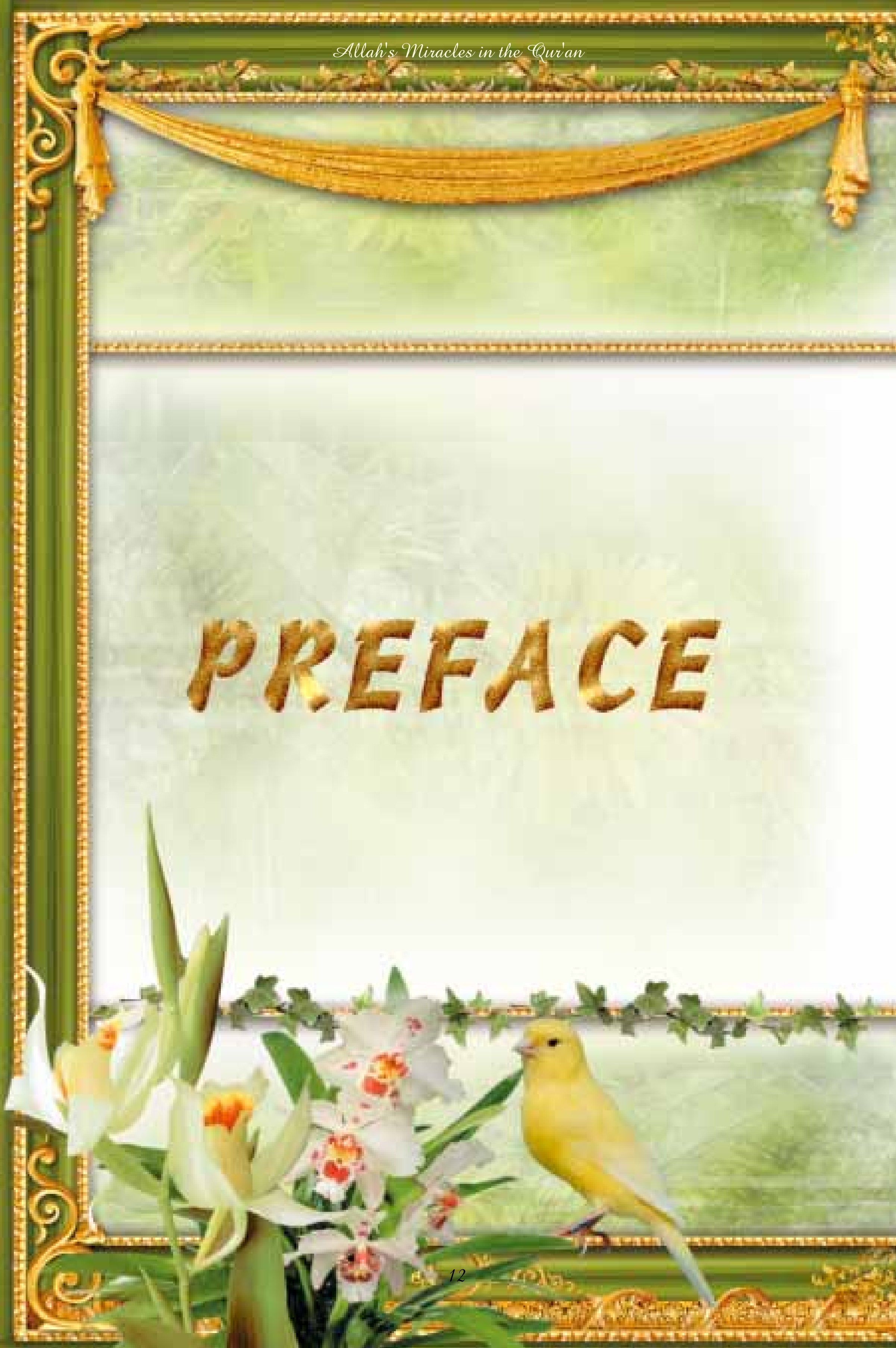
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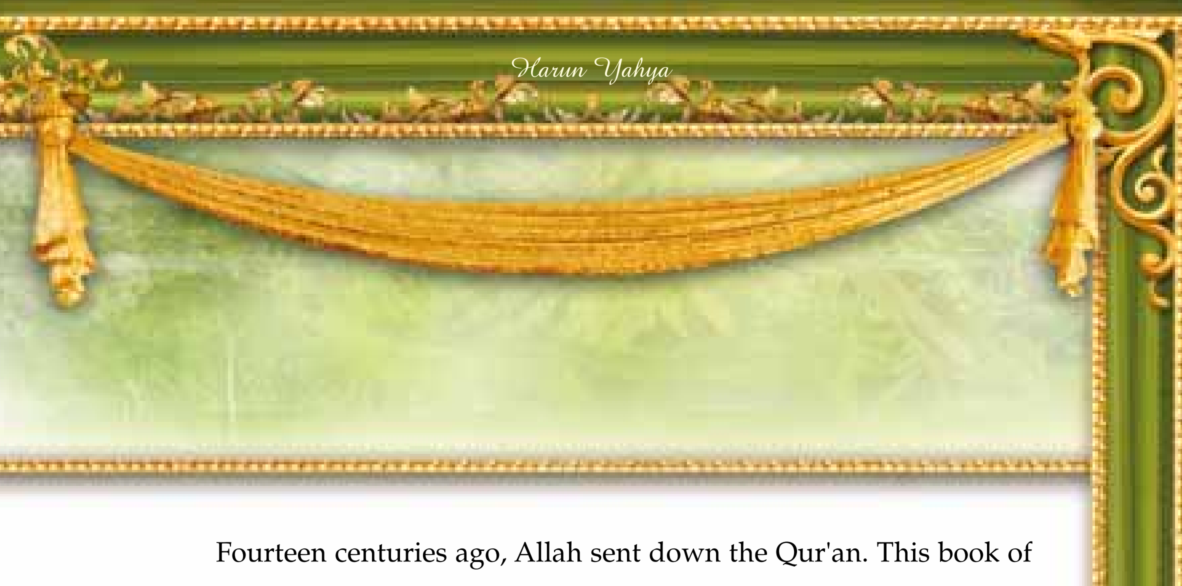
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PREFACE



Fourteen centuries ago, Allah sent down the Qur'an. This book of guidance and wisdom calls man to the truth and instructs all human beings to adhere to the values which this mighty revelation contains. From the day of its revelation to the Day of Judgement, this last divine book will remain as the sole guide for humanity. The book of Allah states, **"But it is nothing less than a Reminder to all the worlds."** (Qur'an, 68:52)

Ever since the Qur'an was revealed, it has possessed an easily understandable language and tone, accessible to all people and in all times. Allah tells us of this style in the Qur'an: **"We have made the Qur'an easy to remember..."** (Qur'an, 54:22)

The perfection of the literary language of the Qur'an, the incomparable features of its style and the superior wisdom contained within it are some of the definitive proofs that it represents the word of our Lord.

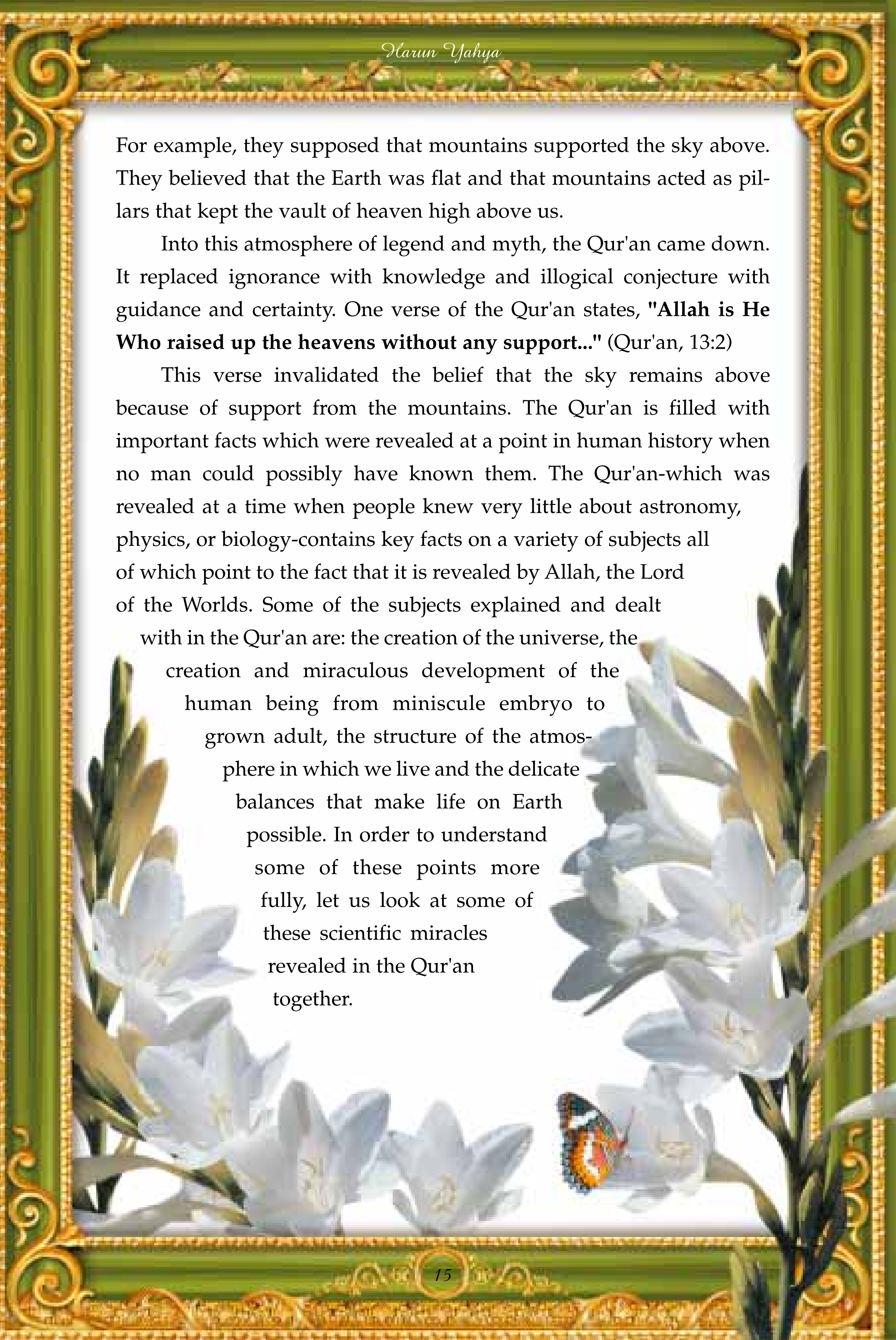


In addition, the Qur'an contains within its words many miracles which prove it to be Allah's word. One of these attributes is the remarkable number of scientific truths which are contained in the Book of Islam. In this book which was revealed over fourteen centuries ago to the Prophet Muhammad (saas), there are innumerable examples of information humanity have only been able to uncover by the technology of the 20th and 21st centuries.

Of course, we should not view the Qur'an as a book of science for it is primarily a book of moral and spiritual guidance. However, many scientific facts that are expressed in an extremely concise and profound manner, within the verses of the Qur'an, have only been discovered by scientists with the aid of the technological advancement of the 20th and 21st centuries. Quite simply, these facts which we now point out to the reader could not have been known at the time of the Qur'an's revelation, and this is still more proof that the Qur'an is the word of Allah.

In order to understand the scientific miracles contained in the Qur'an, we must first look at the level of scientific knowledge which existed at the time when this holy book was revealed. When one understands the context in which the Qur'an was revealed, one can understand more clearly how extraordinary the book of Islam actually is.

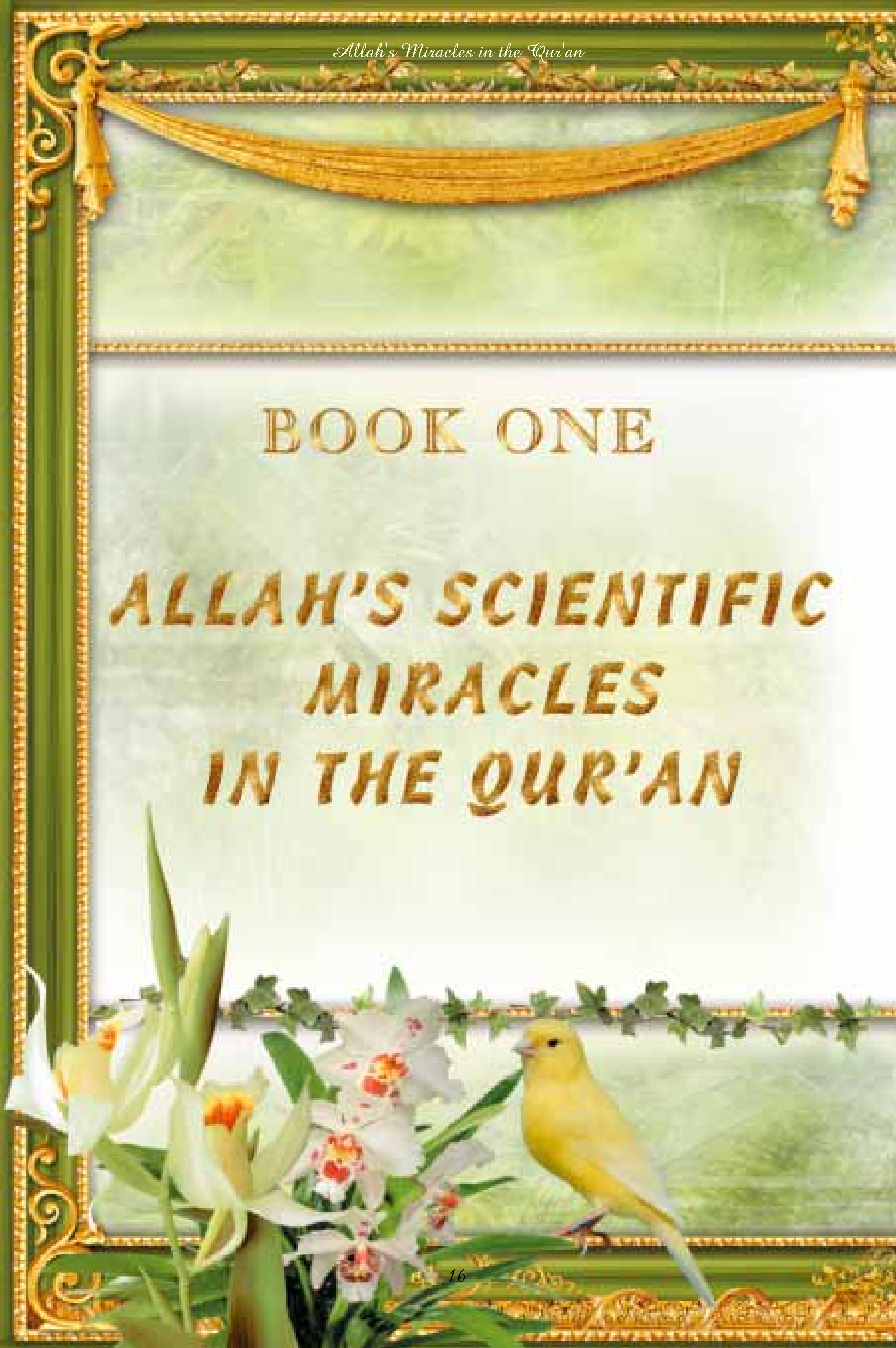
In the 7th century, when these sacred verses were sent down, Arab society was awash with many superstitious and groundless notions. Lacking the technology to examine the universe and nature, these early Arabs believed in uncorroborated tales inherited from past generations and did not question them.



For example, they supposed that mountains supported the sky above. They believed that the Earth was flat and that mountains acted as pillars that kept the vault of heaven high above us.

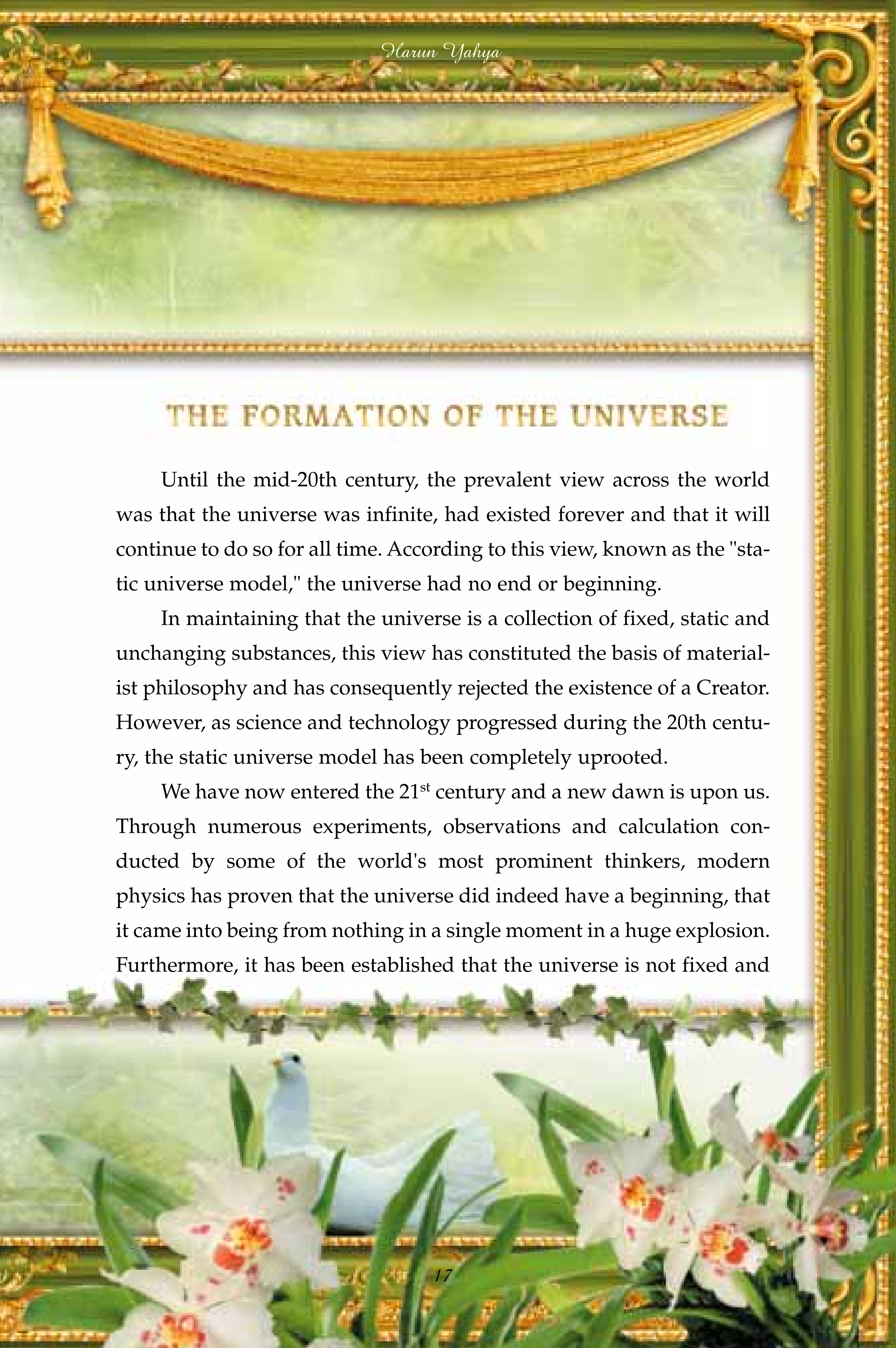
Into this atmosphere of legend and myth, the Qur'an came down. It replaced ignorance with knowledge and illogical conjecture with guidance and certainty. One verse of the Qur'an states, **"Allah is He Who raised up the heavens without any support..."** (Qur'an, 13:2)

This verse invalidated the belief that the sky remains above because of support from the mountains. The Qur'an is filled with important facts which were revealed at a point in human history when no man could possibly have known them. The Qur'an-which was revealed at a time when people knew very little about astronomy, physics, or biology-contains key facts on a variety of subjects all of which point to the fact that it is revealed by Allah, the Lord of the Worlds. Some of the subjects explained and dealt with in the Qur'an are: the creation of the universe, the creation and miraculous development of the human being from miniscule embryo to grown adult, the structure of the atmosphere in which we live and the delicate balances that make life on Earth possible. In order to understand some of these points more fully, let us look at some of these scientific miracles revealed in the Qur'an together.



BOOK ONE

ALLAH'S SCIENTIFIC MIRACLES IN THE QUR'AN



THE FORMATION OF THE UNIVERSE

Until the mid-20th century, the prevalent view across the world was that the universe was infinite, had existed forever and that it will continue to do so for all time. According to this view, known as the "static universe model," the universe had no end or beginning.

In maintaining that the universe is a collection of fixed, static and unchanging substances, this view has constituted the basis of materialist philosophy and has consequently rejected the existence of a Creator. However, as science and technology progressed during the 20th century, the static universe model has been completely uprooted.

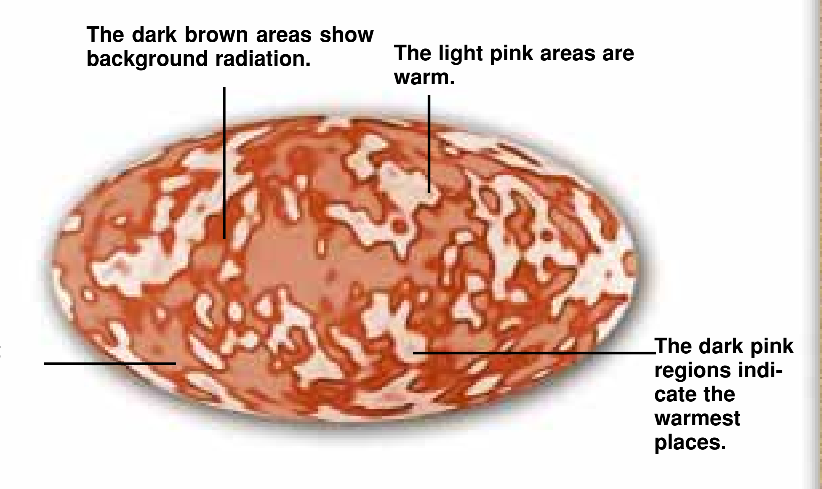
We have now entered the 21st century and a new dawn is upon us. Through numerous experiments, observations and calculation conducted by some of the world's most prominent thinkers, modern physics has proven that the universe did indeed have a beginning, that it came into being from nothing in a single moment in a huge explosion. Furthermore, it has been established that the universe is not fixed and

static, as materialists still stubbornly maintain. On the contrary, it is undergoing a constant process of movement, change and expansion. These recently-established facts all act as nails in the coffin of the static universe theory. Today, all these facts are universally accepted by the scientific community.

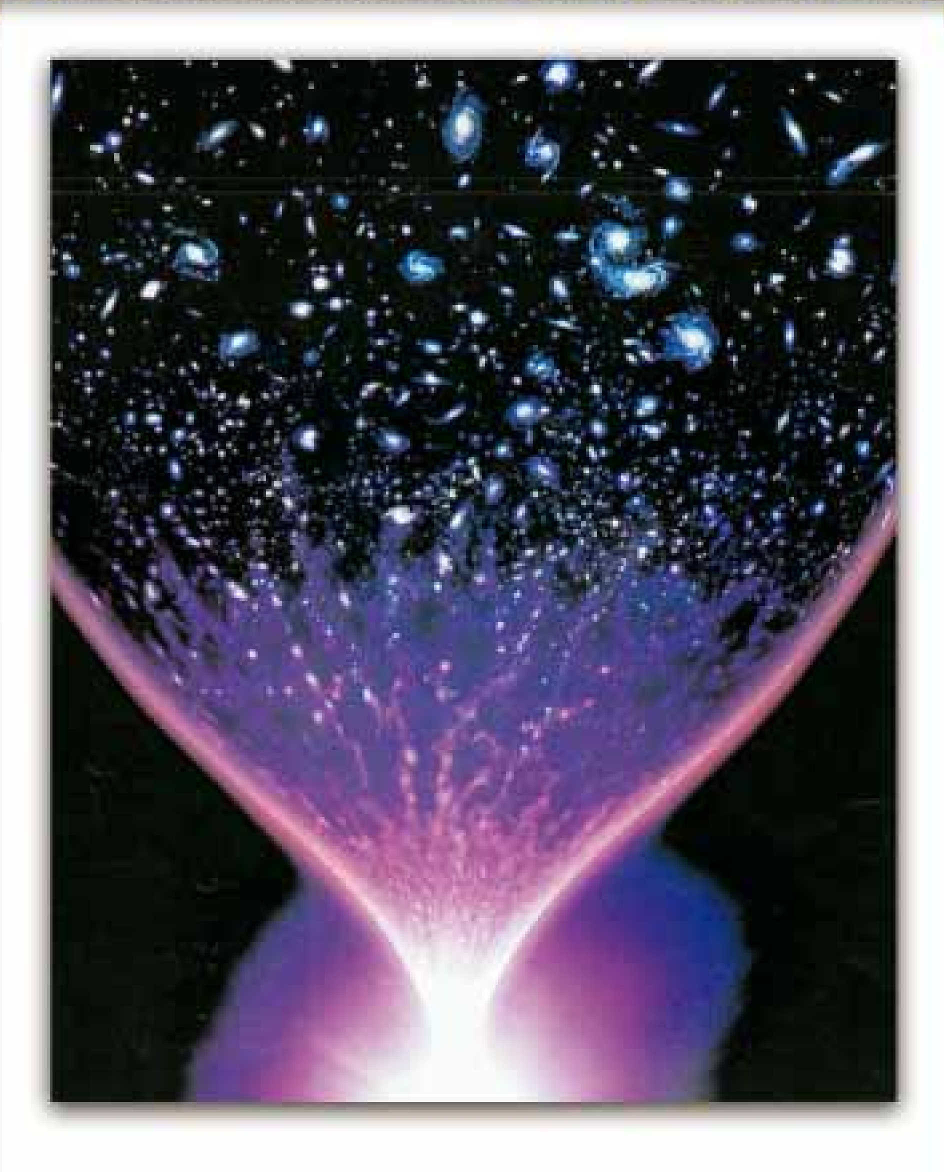
The origin of the universe is described in the Qur'an in the following verse:

He created the heavens and the Earth *from nothing*. (Qur'an, 6:101)

This information is in full agreement with the findings of contemporary scientists. As we stated earlier, the conclusion that astrophysics has reached today is that the entire universe, together with the dimensions of matter and time, came into existence as a result of a great explosion that occurred a long time ago. This event, known as "The Big Bang," is the catalyst for the creation of the universe from nothingness. This explosion, all parties in the scientific community agree, emanated from a single point some 15 billion years ago. (See Harun Yahya, *The Creation of the Universe*, Al-Attique Publishers Inc., Canada, 2000)



The sensitive sensors on board the COBE space satellite, launched by NASA in 1992, captured evidentiary remnants of the Big Bang. This discovery served as evidence for the Big Bang, which is the scientific explanation of the fact that the universe was created from nothing.



Before the Big Bang, there was no such thing as matter. From a condition of non-existence in which neither matter, nor energy, nor even time existed-and which can only be described metaphysically-matter, energy, and time were all created in an instant. This fact, only recently discovered by modern physics, was announced to us in the Qur'an 1,400 years ago.

THE EXPANDING UNIVERSE

In the Qur'an, which was revealed fourteen centuries ago at a time when the science of astronomy was still primitive, the expansion of the universe was described in the following terms:

And it is We Who have constructed the heaven with might, and verily, *it is We Who are steadily expanding it*. (Qur'an, 51:47)

The word "heaven," as stated in the verse above, is used in various places in the Qur'an. It is referring to space and the wider universe. Here again, the word is used with this meaning, stating that the universe "expands." The Arabic word "*moosi'oona*" in the term "*inna lamoosi'oona*," translated into English as "**it is We Who are steadily expanding it,**" comes from the verb "*awsa'a*," meaning "to expand." The prefix "*la*" emphasises the following name or title and adds a sense of "to a great extent." This expression therefore means "We expand the sky or the universe to a great extent." This is the very conclusion that science has reached today.[1]

Until the dawn of the 20th century, the only view prevailing in the world of science was that "the universe has a constant nature and it has existed since infinite time." However, modern research, observations, and calculations carried out by means of modern technology have revealed that the universe in fact had a beginning and that it constantly "expands."

At the beginning of the 20th century, the Russian physicist Alexander Friedmann and the Belgian cosmologist Georges Lemaître theoretically calculated that the universe is in constant motion and that it is expanding.

This notion was confirmed by the use of observational data in 1929. While observing the sky with a telescope, Edwin Hubble, the American astronomer, discovered that the stars and galaxies were con-

stantly moving away from each other. This discovery is regarded as one of the greatest in the history of astronomy. During these observations, Hubble established that the stars emit a light that turns redder according to their distance. That is because according to the known laws of physics, light heading towards a point of observation turns violet, and light moving away from that point assumes a more reddish hue. During his observations, Hubble noted a tendency towards the colour red in the light emitted by stars. In short, the stars were moving further and further away, all the time. The stars and galaxies were not only moving away from us, but also from each other. A universe where everything constantly moves away from everything else implied a constantly expanding universe. The observations carried out in the following years verified that the universe is constantly expanding.

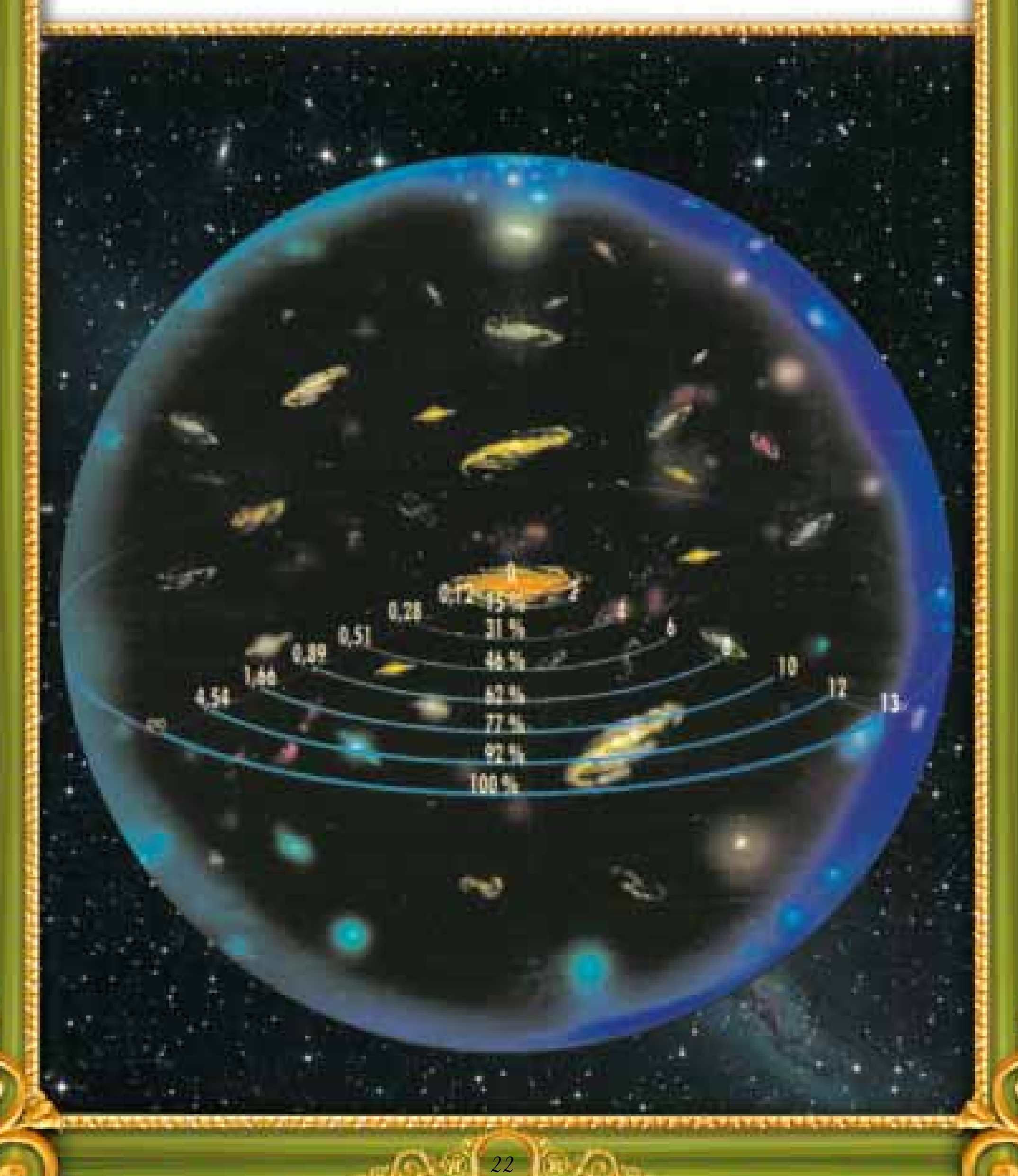


Edwin Hubble with his giant telescope

In order to gain a clearer understanding of this, let us imagine the universe to be the surface of a balloon being inflated. In the same way that the more the balloon is inflated, the further away the points on its surface move from one another, celestial bodies also move away from one another as the universe expands. This was theoretically discovered by Albert Einstein, regarded as one of the greatest scientists of the 20th century. However, in order to avoid violating the "static universe model" that was generally accepted at that time, Einstein laid that discovery aside. He would later describe this as the greatest blunder of his life.[2]

This fact was explained in the Qur'an in a time when telescopes and similar technological advancements were not even close to being invented. This is because the Qur'an is the word of Allah: the Creator and Ruler of the entire universe.

From the moment of the Big Bang, the universe has been constantly expanding at a great speed. Scientists compare the expanding universe to the surface of a balloon that is inflated.



THE END OF THE UNIVERSE AND THE BIG CRUNCH

As we have stated above, the creation of the universe began with a huge explosion. From this point, the universe has been expanding ever since. Scientists say that when the mass of the universe has reached a sufficient level, this expansion will come to an end because of gravity, causing the universe to collapse in on itself.[3]

It is also believed that the contracting universe will end in a fierce heat and contraction known as the "Big Crunch." This would lead to the end of all forms of life as we know them. Renata Kallosh and Andrei Linde, professors of physics from Stanford University, made the following statements on the subject:

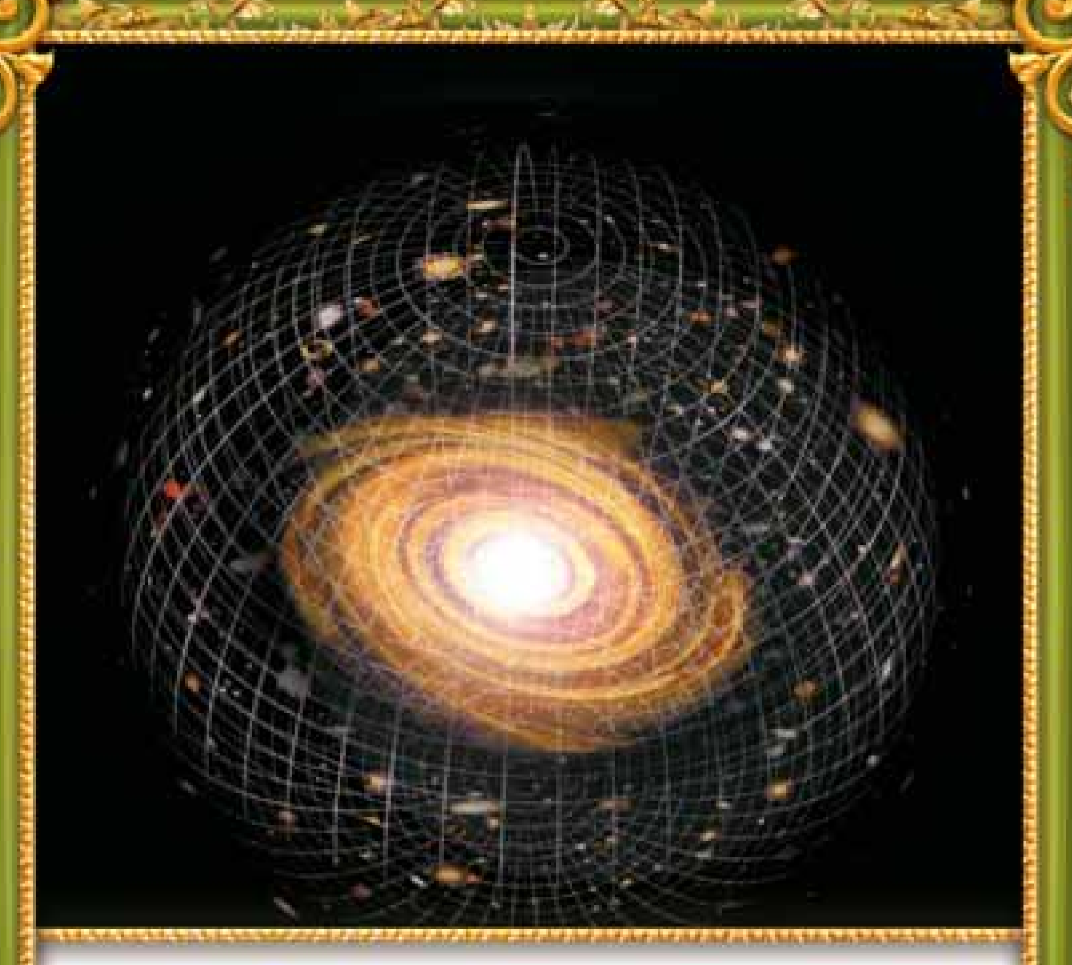
> The universe may be doomed to collapse and disappear. Everything we see now, and at a much larger distance that we cannot see, will collapse into a point smaller than a proton. Locally, it will be the same as if you were inside a black hole... We have found that some of the best attempts to describe dark energy predict that it will gradually become negative, which will cause the universe to become unstable, then collapse... Physicists have known that dark energy could become negative and the universe could collapse sometime in the very distant future... but now we see that we might be, not in the beginning, but in the middle of the life cycle of our universe.[4]

This is how this scientific hypothesis of the Big Crunch is indicated in the Qur'an:

> **That Day** ***We will fold up heaven like folding up the pages of a book. As We originated the first creation so We will regenerate it.*** **It is a promise binding on Us. That is what We will do. (Qur'an, 21:104)**

In another verse, this state of the heavens is described thus:

> **They do not measure Allah with His true measure. The whole Earth**



The Big Crunch theory proposes that the universe, that began expanding with the Big Bang, will collapse in on itself with increasing speed. According to the theory, this collapse of the universe will continue until the universe has lost all its mass and turned into a single point of infinite density.

will be a mere handful for Him on the Day of Resurrection t*he heavens folded up in His right hand.* Glory be to Him! He is exalted above the partners they ascribe! (Qur'an, 39:67)

According to the Big Crunch theory, the universe will begin to collapse slowly and will then increasingly pick up speed. At the end of the process the universe will have infinite density and be infinitely hot and small. This scientific theory runs parallel to the Qur'anic explanation of this particular scientific concept. (Allah knows best)

CREATION FROM HOT SMOKE

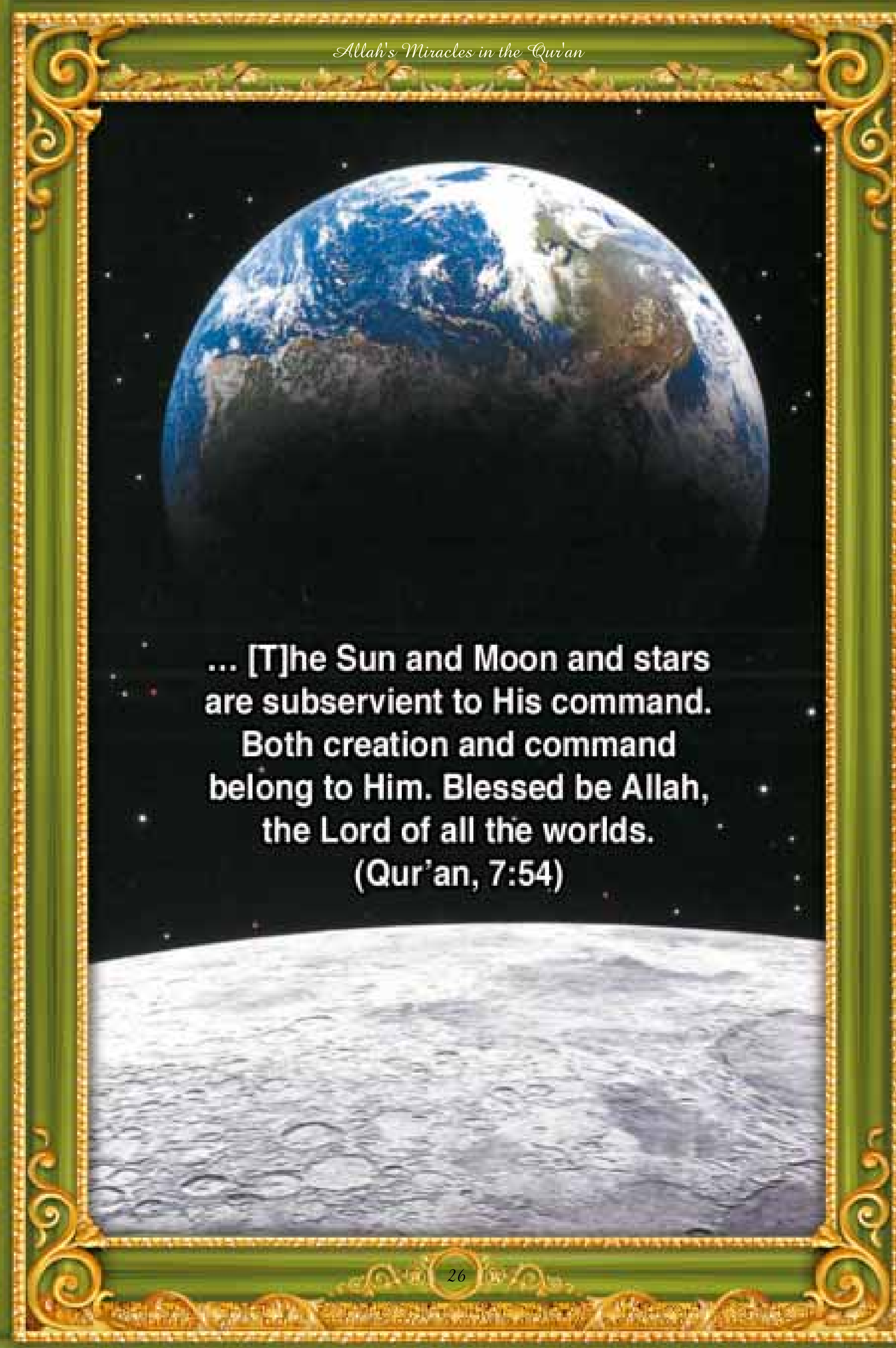
Scientists today are able to observe the formation of stars from a hot gas cloud. Formation from a warm mass of gas also applies to the creation of the universe. The creation of the universe as described in the Qur'an confirms this scientific discovery in the following verse:

He placed firmly embedded mountains on it, towering over it, and blessed it and measured out its nourishment in it, laid out for those who seek it-all in four days. Then He turned to *heaven when it was smoke* and said to it and to the Earth, "Come willingly or unwillingly." They both said, "We come willingly." (Qur'an, 41:10-11)

The Arabic word for "*samaa',*" translated here as "heaven," refers to the entire universe. The word "*dukhaanun*" for "smoke" describes the matter before the universe took its shape-the hot, cosmic smoke present during the creation of the universe, as now acknowledged by scientist.[5] This word in the Qur'an, in pinpoint fashion, describes this smoke very accurately for it is a warm body of gas containing mobile particles connected to solid substances. Here, the Qur'an has employed the most appropriate word from the Arabic language for describing the appearance of this phase of the universe. Let us note that only in the 20th century have scientists discovered that the universe emerged from a hot gas in the form of smoke.

In addition, the word "*thumma,*" translated as "then" in the expression "Then He turned to heaven when it was smoke," bears other meanings such as "at this, in addition, furthermore, moreover, again, once more." Here, "*thumma*" is employed not as an expression of time, but as an additional clarification.[6]

The fact that such information about the creation of the universe is given in the Qur'an is nothing short of a miracle of the Qur'an.


... [T]he Sun and Moon and stars
are subservient to His command.
Both creation and command
belong to Him. Blessed be Allah,
the Lord of all the worlds.
(Qur'an, 7:54)

THE SEPARATION OF THE HEAVENS AND THE EARTH

Another verse about the creation of the heavens is as follows:

Do not the unbelievers see that *the heavens and the Earth were sewn together and then We unstitched them* and that We made from water every living thing? So will they not believe? (Qur'an, 21:30)

The word "*ratq*" translated as "sewn to" means "mixed in each, blended" in the Arabic vernacular. It is used to refer to two different substances that make up a whole. The phrase "we unstitched" is the verb "*fataqa*" in Arabic and implies that something comes into being by tearing apart or destroying the structure of things that are sewn to one another. The sprouting of a seed from the soil is one of the actions to which this verb is applied.

Let us take a look at the verse again. In the verse, sky and earth are at first subject to the status of "*ratq*." They are separated (*fataqa*) with one coming out of the other. Intriguingly, when we think about the first moments of the Big Bang, we see that the entire matter of the universe collected at one single point. In other words, everything-including "the heavens and earth" which were not created yet-were in an interwoven and inseparable condition. Then, this point exploded violently, causing its matter to disunite.

THE CREATION OF WHAT LIES BETWEEN THE HEAVENS AND THE EARTH

The Qur'an contains a great many verses concerning the creation of the Earth, the heavens and what lies between:

We did not create *the heavens and Earth and everything between them,* except with truth. The Hour is certainly coming, so turn away graciously. (Qur'an, 15:85)

***Everything in the heavens and everything on the Earth and everything in between them* and everything under the ground belongs to Him. (Qur'an, 20:6)**

We did not create *heaven and Earth and everything in between them* as a game. (Qur'an, 21:16)

Scientists state that first of all, a mass of hot gas increased in density. This mass later divided into smaller parts to form galactic matter and later still, the stars and planets. To put it another way, the Earth along with stars around it, are all parts which separated from a united

body of gas. Some of these parts brought the suns and planets into being, thus leading to the emergence of the many Solar Systems and galaxies. As we have set out in earlier sections of this book, the universe was first in a state of "*ratq*" (fusion: combined together, united) and then became "*fataqa*" (divided into parts). The emergence of the universe is described with the most suitable words in the Qur'an, in such a way as to confirm the scientific accounts.[7]

On the occasion of every division, a few particles remained outside the new, fundamental bodies forming in space. The scientific name for these extra particles is "interstellar galactic material." Interstellar matter consists of 60% of hydrogen, 38% of helium and 2% of all other elements. Of the interstellar matter, 99% consists of interstellar gas and 1% of interstellar dust, which probably consists of heavy elements in small particles of 0.0001 to 0.001 mm in diameter.[8] Scientists regard these substances as very important from the point of view of astrophysical measurements. These substances are so fine as to be capable of being regarded as dust, smoke or gas. However, when one considers these substances as a whole, they represent a larger mass than the total of all the galaxies in space. Although the existence of this interstellar galactic matter was only discovered in 1920, attention was drawn to the existence of these particles, described as "*maa baynahuma*"-translated as "everything between them"-hundreds of years ago in the Qur'an.

THE PERFECT EQUILIBRIUM IN THE UNIVERSE

He Who created the seven heavens in layers. You will not find *any discrepancy in the creation of the All-Merciful.* Look again-do you see any gaps? Then look again and again. Your sight will return to you dazzled and exhausted! (Qur'an, 67:3-4)

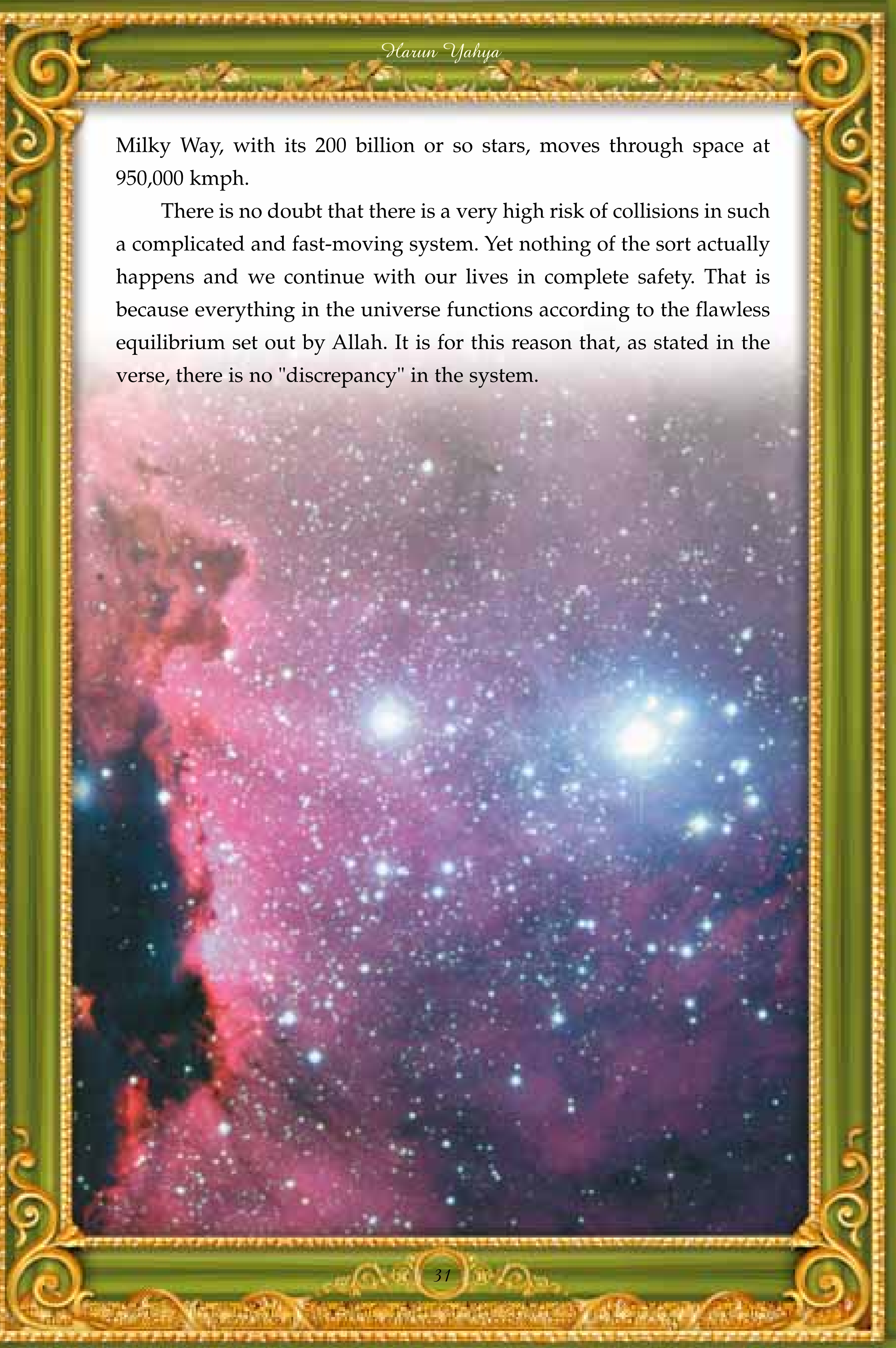
The billions of stars and galaxies in the universe move in perfect equilibrium in the paths set out for them. Stars, planets and satellites rotate not only around their own axes but also together with the systems of which they are an integral part. Sometimes, galaxies containing 200-300 billion stars move across each others' paths. Yet amazingly, no collisions take place that might damage the great order in the universe. This miracle is something over which all of us should reflect.

In the universe, the concept of speed assumes giant dimensions when compared to earthly measurements. Stars, planets, galaxies and conglomerations of galaxies-whose numerical properties can only be conceived by mathematicians-weigh billions or trillions of tons, and move through space at extraordinary speeds.

For example, the Earth rotates at 1,670 kmph (1,038 mph). If we consider that the fastest-moving bullet today possesses an average speed of 1,800 kmph, we can see how fast the Earth is moving, despite its enormous size and mass.

The speed of the Earth as it orbits the Sun is some 60 times faster than a bullet: 108,000 kmph. If we were able to construct a vehicle capable of moving at that speed, it would be able to circumnavigate the Earth in 22 minutes. These figures apply only to the Earth.

Those for the Solar System are even more fascinating. The speed of that system is such as to exceed the bounds of reason: The larger the systems in the universe, the greater their speed. The Solar System's speed of orbit around the centre of the galaxy is 720,000 kmph. The



Milky Way, with its 200 billion or so stars, moves through space at 950,000 kmph.

There is no doubt that there is a very high risk of collisions in such a complicated and fast-moving system. Yet nothing of the sort actually happens and we continue with our lives in complete safety. That is because everything in the universe functions according to the flawless equilibrium set out by Allah. It is for this reason that, as stated in the verse, there is no "discrepancy" in the system.

THE FINE TUNING IN THE UNIVERSE

He Who created the seven heavens in layers. You will not find any flaw in the creation of the All-Merciful. Look again-do you see any gaps? Then look again and again. Your sight will return to you dazzled and exhausted! (Qur'an, 67:3-4)

Don't you see how He created seven heavens in layers? (Qur'an, 71:15)

He to Whom the kingdom of the heavens and the earth belongs. He does not have a son and He has no partner in the Kingdom. He created everything and determined it most exactly. (Qur'an, 25:2)

Materialist philosophy emerged with the claim that all the systems in nature and the universe were like machines that functioned on their own, that the flawless order and balance within them were the work of chance. However, today, the false nature of materialism and of Darwinism, its so-called scientific foundation, has been scientifically demonstrated. (See Harun Yahya, *The Evolution Deceit*, 8th ed., Ta-Ha Publishers, 2004 and *Darwinism Refuted*, Goodword Books, 2003.)

The scientific discoveries of the 20th century that followed swiftly, one after the other, in the fields of astrophysics and biology have proved that life and the universe were created. As the theses of Darwinism collapsed, the Big Bang theory has shown that the universe was created from nothing. Discoveries have revealed that there is a great design and fine-tuning in the material world and this has categorically demonstrated the groundless nature of the claims of materialism.

Considering the conditions necessary for life, we see that only the Earth meets these particular conditions. For an environment suitable for life, there are innumerable conditions taking place simultaneously and unceasingly all around us. There are some hundred billion galaxies, each with-on average-a hundred billion stars. In all the galaxies, there are perhaps as many planets as stars.[9] In the face of such overpowering numbers, one can better comprehend the significance of the

formation of such an exceptional environment on the Earth.

From the force of the Big Bang explosion to the physical values of atoms, from the levels of the four basic forces to the chemical processes in the stars, from the type of light emitted by the Sun to the level of viscosity of water, from the distance of the Moon to the Earth to the level of gases in the atmosphere, from the Earth's distance from the Sun to its angle of tilt to its orbit, and from the speed at which the Earth revolves around its own axis to the functions of the oceans and mountains on the Earth: every single detail is ideally suited to our lives. Today, the world of science describes these features by means of the concepts of the "Anthropic Principle" and "Fine-Tuning." These concepts summarise the way that the universe is not an aimless, uncontrolled, chance collection of matter but that it has a purpose directed towards human life and has been designed with the greatest precision.

Attention is drawn in the above verses to the measure and harmony in Allah's creation. The word "*taqdeer*," meaning "to design, measure, create by measuring," is employed in Qur'anic verses such as Surat al-Furqan 2. The word "*tibaaq*," meaning "in harmony," is used in Surat al-Mulk 3 and Surah Nuh 15. Furthermore, Allah also reveals in Surat al-Mulk with the word "*tafaawut*," meaning "disagreement, violation, non-conformity, disorder, opposite," that those who seek disharmony will fail to find it.

The term "fine-tuning," which began to be used towards the end of the 20*th* century, represents this truth revealed in the verses. Over the last quarter-century or so, a great many scientists, intellectuals and writers have shown that the universe is not a collection of coincidences. On the contrary, it has an extraordinary design and order ideally suited to human life in its every detail. (See Harun Yahya, *The Creation of the Universe*, Al-Attique Publishers, November 2002 and *A Chain of Miracles*, Global Publishing, May 2004.) Many features in the universe clearly show that the universe has been specially designed to support life. The physicist Dr. Karl Giberson expresses this fact thus:

In the 1960s, some physicists observed that our universe appears to have been **fine-tuned** for the existence of human life.[10]

The British astrophysicist Professor George F. Ellis refers to this fine-tuning in these terms:

> **Amazing fine tuning** occurs in the laws that make this [complexity] possible. Realization of the complexity of what is accomplished makes it very difficult not to use the word "miraculous" without taking a stand as to the ontological status of the word.[11]

The Speed of the Big Bang Explosion:

The balances established with the Big Bang, the instantaneous formation of the universe, are one of the proofs that the universe did not come into being by chance. According to the well-known Adelaide University professor of mathematical physics Paul Davies, if the rate of expansion that took place following the Big Bang had been just one in a billion billion parts different ($1/10^{18}$), the universe could not have come into being. [12] In his book *A Brief History of Time*, Stephen Hawking recognises this extraordinary precision in the universe's rate of expansion:

> If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand million million, the universe would have recollapsed before it ever reached its present size.[13]

The Four Forces:

All physical motion in the universe comes about thanks to the interaction and equilibrium of the four forces recognised by modern physics: gravity, electromagnetic force, strong nuclear force and weak nuclear force. These forces possess extraordinarily different values to one another. Michael Denton, the famous molecular biologist, describes the extraordinary equilibrium among these forces thus:

> If, for example, the gravitational force was a trillion times stronger, then

the universe would be far smaller and its life history far shorter. An average star would have a mass a trillion times less than the sun and a life span of about one year. On the other hand, if gravity had been less powerful, no stars or galaxies would have ever formed. The other relationships and values are no less critical. If the strong force had been just slightly weaker, the only element that would be stable would be hydrogen. No other atoms could exist. If it had been slightly stronger in relation to electromagnetism, then an atomic nucleus consisting of only two protons would be a stable feature of the universe-which would mean there would be no hydrogen, and if any stars or galaxies evolved, they would be very different from the way they are. Clearly, if these various forces and constants did not have precisely the values they do, there would be no stars, no supernovae, no planets, no atoms, no life.[14]

The Distances between Celestial Bodies:

The distribution of celestial bodies in space and the enormous spaces between them are essential to the existence of life on Earth. The distances between celestial bodies have been set out in a calculation compatible with a great many powerful universal forces in such a way as to support life on Earth. In his book *Nature's Destiny* Michael Denton describes the distance between supernovae and stars:

The distances between supernovae and indeed between all stars is critical for other reasons. The distance between stars in our galaxy is about 30 million miles. If this distance was much less, planetary orbits would be destabilized. If it was much more, then the debris thrown out by a supernova would be so diffusely distributed that planetary systems like our own would in all probability never form. If the cosmos is to be a home for life, then the flickering of the supernovae must occur at a very precise rate and the average distance between them, and indeed between all stars, must be very close to the actual observed figure.[15]

Gravity:

- If gravity were stronger, excessive ammonia and methane would collect in the Earth's atmosphere, which would have a most damaging effect on life.

- If it were weaker, the Earth's atmosphere would lose excessive quantities of water, making life impossible.

The Earth's Distance from the Sun:

- If this were any greater, the planet would grow very cold, the water cycle in the atmosphere would be affected, and the planet would enter an ice-age.

- If the Earth were any closer to the Sun, plants would burn up, the water cycle in the Earth's atmosphere would be irreparably damaged, and life would become impossible.

The Thickness of the Earth's Crust:

- If the crust were any thicker, then an excessive amount of oxygen would be transferred to it from the atmosphere.

- If it were any thinner, the resulting amount of volcanic activity would make life impossible.

The Speed at which the Earth Revolves:

- If this were any slower, the temperature difference between day and night would grow enormously.

- If it were any faster, then atmospheric winds would reach enormous speeds, and cyclones and storms would make life impossible.

The Earth's Magnetic Field:

- If this were any more powerful, very strong electromagnetic storms would arise.

- If it were any weaker, then the Earth would lose its protection against the harmful particles given off by the Sun and known as solar winds. Both situations would make life impossible.

The Albedo Effect (The Fraction of Light Reflected by the Earth):

- If this were any greater, an ice-age would rapidly result.

- If it were any less, the greenhouse effect would lead to excessive warming. The Earth would first be flooded with the melting of the glaciers, and would then burn up.

The Proportion of Oxygen and Nitrogen in the Atmosphere:

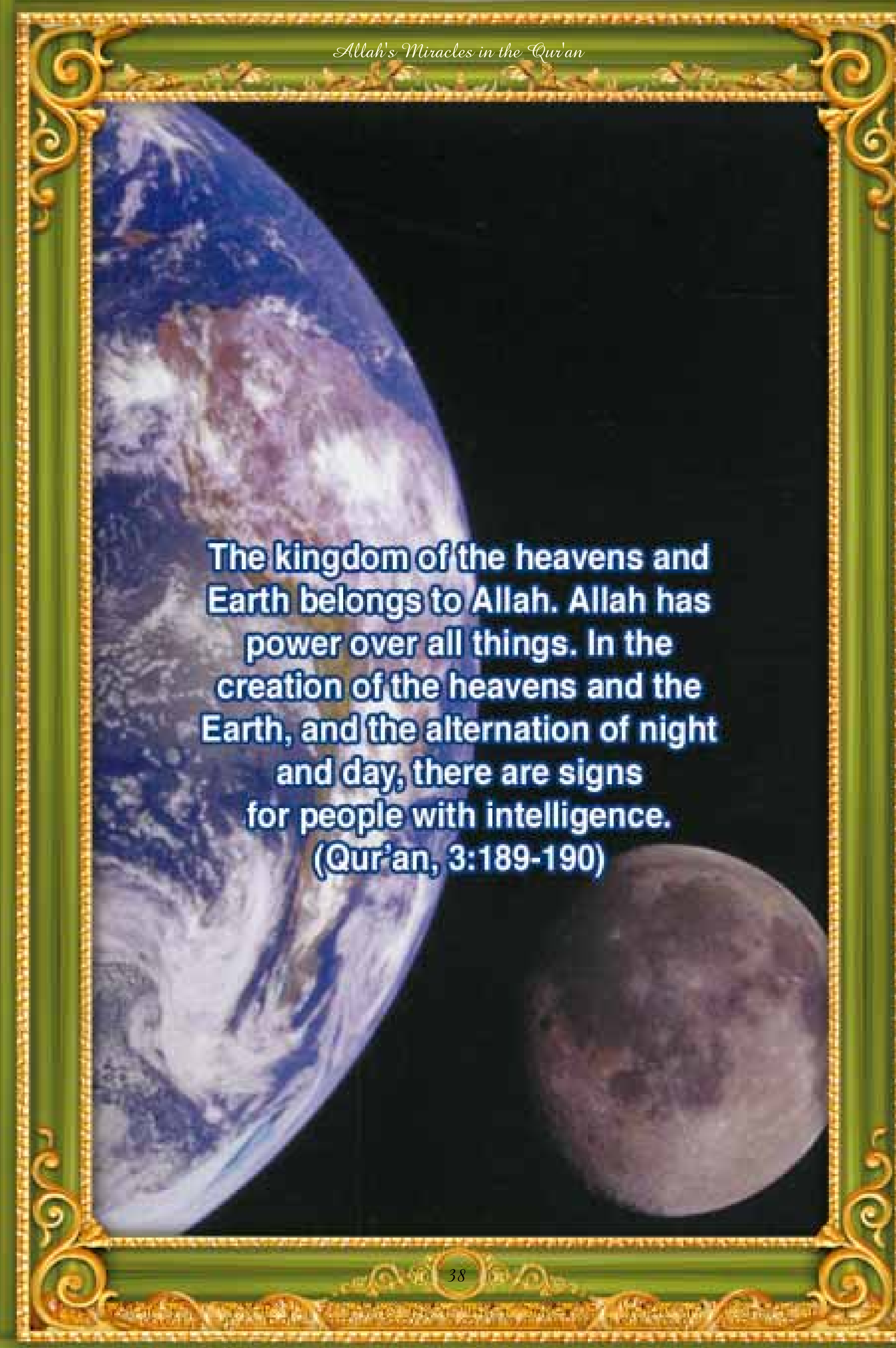
- If this were any greater, vital functions would be adversely accelerated.

- If it were any less, vital functions would adversely slow down.

The Proportion of Carbon Dioxide and Water in the Atmosphere:

- If this were any greater, the atmosphere would overheat.

- If it were any less, the temperature of the atmosphere would fall.


The kingdom of the heavens and
Earth belongs to Allah. Allah has
power over all things. In the
creation of the heavens and the
Earth, and the alternation of night
and day, there are signs
for people with intelligence.
(Qur'an, 3:189-190)

The Thickness of the Ozone Layer:

- If this were any greater, the Earth's temperature would fall enormously.

- If it were any less, the Earth would overheat and be defenceless against the harmful ultraviolet rays emitted by the Sun.

Seismic Activity (Earthquakes):

- If this were any greater, there would be constant upheaval for living things.

- If it were any less, the nutrients at the sea bottom would fail to spread into the water. This would have a damaging effect on life in the seas and oceans and all living things on Earth.

The Earth's Angle of Tilt:

The Earth has a 23 degree angle of inclination to its orbit. It is this inclination that gives rise to the seasons. If this angle were any greater or any less than it is now, the temperature difference between the seasons would reach extreme dimensions, with unbearably hot summers and bitterly cold winters.

The Size of the Sun:

A smaller star than the Sun would mean the Earth would freeze and a larger star would lead to its burning up.

The Attraction between the Earth and the Moon:

- If this were any greater, the powerful attraction of the Moon would have extremely serious effects on atmospheric conditions, the speed at which the Earth revolves around its own axis and on the ocean tides.

- If it were any less, this would lead to extreme climate changes.

The Distance between the Earth and the Moon:

- If they were just a little closer, the Moon would crash into the Earth.
- If they were any further, the Moon would become lost in space.
- If they were even a little closer, the Moon's effect on the Earth's tides would reach dangerous dimensions. Ocean waves would inundate low-lying areas. The friction emerging as a result of this would raise the temperature of the oceans and the sensitive temperature balance essential to life on Earth would disappear.
- If they were even a little further away, the tides would decrease, leading the oceans to be less mobile. Immobile water would endanger life in the seas, and the level of the oxygen we breathe would be endangered.[16]

The Temperature of the Earth and Carbon-Based Life:

The existence of carbon, the basis of all life, depends on the temperature remaining within specific limits. Carbon is an essential substance for organic molecules such as amino-acid, nucleic acid and protein: These constitute the basis of life. For that reason, life can only be carbon-based. Given this, the existing temperature needs to be no lower than -20 degrees and no higher than 120 degrees Celsius (248°F). These are just the temperature limits on Earth.

These are just a few of the exceedingly sensitive balances which are essential for life on Earth to have emerged and to survive. Yet even these are sufficient to definitively reveal that the Earth and the universe could not have come into being as the result of a number of consecutive coincidences. The concepts of "fine-tuning" and the "anthropic principle" that began to be employed in the 20th century are further evidence of Allah's creation. The harmony and proportion therein were described with magnificent accuracy fourteen centuries ago in the Qur'an.

THE STRUCTURAL DIFFERENCES BETWEEN THE SUN, THE MOON AND THE STARS

We built seven firm layers above you. We installed *a blazing lamp*. (Qur'an, 78:12-13)

As we know, the only source of light in the Solar System is the Sun. With advances in technology, astronomers discovered that the Moon was not a source of light but that it merely reflects the light reaching it from the Sun. The expression "lamp" in the above verse is a translation of the Arabic word "*siraaj*," which most perfectly describes the Sun, the source of light and heat.

In the Qur'an Allah employs different words when referring to such celestial bodies as the Moon, the Sun and the stars. This is how the differences between the structures of the Sun and Moon are expressed in the Qur'an:

Don't you see how He created seven heavens in layers, and placed the Moon as a light in them and made the sun a blazing lamp? (Qur'an, 71:15-16)

In the above verse, the word "light" is used for the Moon ("*noor*" in Arabic) and the word "lamp" for the Sun ("*siraaj*" in Arabic.) The word used for the Moon refers to a light-reflecting, bright, motionless body. The word used for the Sun refers to a celestial body which is always burning, a constant source of heat and light.

On the other hand, the word "star" comes from the Arabic root "*najama*," meaning "appearing, emerging, visible." As in the verse below, stars are also referred to by the word "*thaaqib*," which is used for that which shines and pierces the darkness with light: self-consuming and burning:

It is the star that pierces through darkness! (Qur'an, 86:3)

We now know that the Moon does not emit its own light but

reflects that reaching it from the Sun. We also know that the Sun and stars do emit their own light. These facts were revealed in the Qur'an in an age when mankind simply did not have the means to make scientific discoveries of their own accord. It was an age when peoples' knowledge of celestial bodies was severely restricted, to say the least. This further emphasises the miraculous nature of the book of Islam.



ORBITS AND THE ROTATING UNIVERSE

One of the most important reasons for the great equilibrium in the universe is the fact that celestial bodies follow specific paths. Stars, planets and satellites all rotate around their own axes and also rotate together with the system of which they are a part. The universe functions within a finely-tuned order, just like the wheels in a factory.

There are more than 100 billion galaxies in the visible universe and each small galaxy contains approximately a billion stars. Furthermore, each big galaxy contains more than a trillion.[17] Many of these stars have planets and many of those planets have satellites. All these celestial bodies follow the most finely calculated paths and orbits. For millions of years, each one has been moving in its own path in flawless harmony with all the others. In addition to these, there are also a great many comets moving along in their own pre-determined paths.

In addition, the paths in the universe are not restricted to a few celestial bodies. The Solar System and even other galaxies also exhibit considerable motion around other centres. Every year, Earth, and the Solar System with it, move some 500 million km (310 million miles) from where they were the previous year. It has been calculated that even the slightest deviation from celestial bodies' paths could have drastic consequences which might spell the end of the entire system. For example, the consequences of the Earth's deviating from its course by a mere 3 mm have been described in one source as follows:

> While rotating around the sun, the earth follows such an orbit that, every 18 miles, it only deviates 2.8 millimetres from a direct course. The orbit followed by the earth never changes, because even a deviation of 3 millimetres would cause catastrophic disasters: If the deviation were 2.5 mm instead of 2.8 mm, then the orbit would be very large, and all of us would freeze. If the deviation were 3.1 mm, we would be scorched to death.[18]

Another characteristic of heavenly bodies is that they also rotate around their own axes. The verse which reads "**[I swear] by Heaven with its cyclical systems,**" (Qur'an, 86:11) indicates this truth. Naturally, at the time when the Qur'an was revealed, people had no telescopes with which to study bodies millions of kilometres away in space, advanced observation technology or our modern knowledge of physics and astronomy. It was therefore impossible to establish that space had "**its oscillating orbits**," (Qur'an, 51:7) as described in the verse. The Qur'an however, revealed at that time, provided clear information concerning that fact. This is proof that this book is indeed Allah's word.

Like many other comets in the universe, Halley's comet, seen below, also moves in a planned orbit. It has a specific orbit and it moves in this orbit in a perfect harmony with other celestial bodies.
All celestial bodies-including planets, satellites of these planets, stars and even galaxies-have their own orbits that have been determined with very delicate computations. The One Who established this perfect order and maintains it is Allah, Who created the entire universe.

THE SUN'S TRAJECTORY

It is stressed in the Qur'an that the Sun and Moon follow specific trajectories:

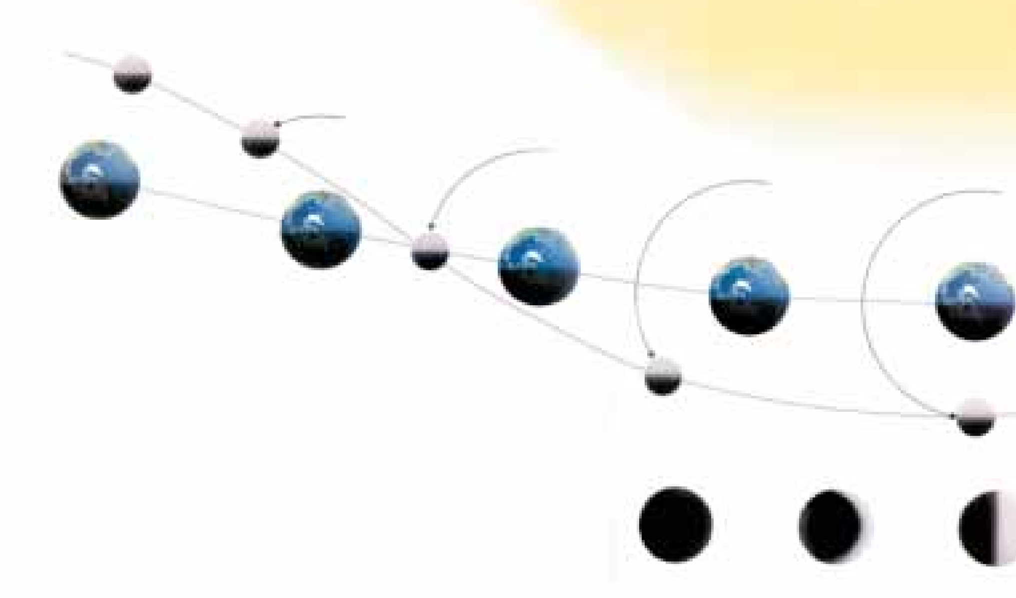
It is He Who created night and day and the Sun and Moon, each one swimming in a sphere. (Qur'an, 21:33)

The word "swim" in the above verse is expressed in Arabic by the word *"sabaha"* and is used to describe the movement of the Sun in space. The word means that the Sun does not move randomly through space but that it rotates around its axis and follows a course as it does so. The fact that the Sun is not fixed in position but rather follows a specific trajectory is also stated in another verse:

And the Sun runs to its resting place. That is the decree of the Almighty, the All-Knowing. (Qur'an, 36:38)

These facts set out in the Qur'an were only discovered by means of astronomical advances in our own time. According to astronomers' calculations, the Sun moves along a path known as the Solar Apex in the path of the star Vega at an incredible speed of 720,000 kmph (447,000 mph). In rough terms, this shows that the Sun traverses some 17.28 million km (10.74 million miles) a day. As well as the Sun itself, all the planets and satellites within its gravitational field also travel the same distance.

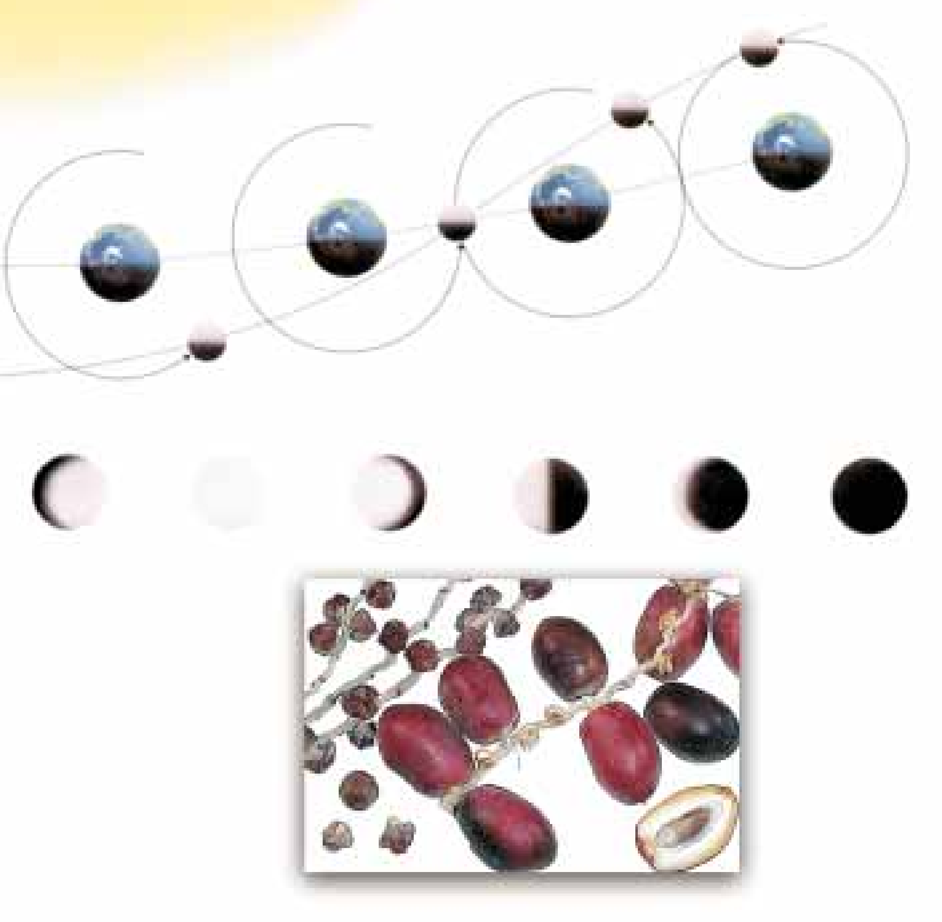
Sun



THE MOON'S ORBIT

And We have decreed set phases for the Moon, until it ends up looking like an old date branch. It is not for the Sun to overtake the Moon nor for the night to outstrip the day; each one is swimming in a sphere. (Qur'an, 36:39-40)

The Moon does not follow a regular orbit like the satellites of other planets. As it orbits the Earth, it sometimes moves behind it and sometimes in front. As it also moves with the Earth around the Sun, it actually follows a constant pattern resembling the letter "S" in space. This route, traced by the Moon in space, is described in the Qur'an as resembling an old date branch and does indeed resemble the twisted form of the date tree branch. Indeed, the word "*urjoon*" employed in the Qur'an refers to a thin and twisted date branch and is used to describe that part left after the fruit has been picked. The way that this branch is described as "old" is also most appropriate since old date branches are thinner and more twisted.



Since the Moon revolves around the Sun together with the Earth, it follows a path through space which resembles the letter "S." The appearance of this orbit resembles the twisted shape of a dry date branch, as is revealed in the Qur'an.

There is no doubt that it was impossible for anyone to have any knowledge about the orbit of the Moon 1,400 years ago. The way that this pattern, identified by modern technology and accumulated knowledge, was revealed in the Book is yet another scientific miracle of the Qur'an.

CALCULATING THE LUNAR YEAR

It is He Who appointed ***the Sun to give radiance, and the Moon to give light, assigning it phases so you would know the number of years and the reckoning of time.*** **Allah did not create these things except with truth. We make the signs clear for people who know. (Qur'an, 10:5)**

And We have decreed set phases for the Moon, until ***it ends up looking like an old date branch.*** **(Qur'an, 36:39)**

In the first of the above verses, Allah has clearly revealed that the Moon will be a means of measurement for people to calculate the year. Furthermore, our attention is also drawn to the fact that these calculations will be performed according to the positions of the Moon as it revolves in its orbit. Since the angles between the Earth and Moon and the Moon and Sun constantly change, we see the Moon in different forms at different times. Furthermore, our ability to see the Moon is made possible by the fact that it is illuminated by the Sun. The amount of the lighted half of the Moon we see from Earth changes. Bearing in mind these changes, a number of calculations can be made, making it possible for human beings to measure the year.

In former times a month was calculated as the time between two full moons, or the time it took the Moon to travel around the Earth. According to this, one month was equal to 29 days, 12 hours and 44 minutes. This is known as the "lunar month." Twelve lunar months represent one year, according to the Hijri calendar. However, there is a difference of eleven days between the Hijri calendar and the Gregorian calendar, in which a year is the time it takes the Earth to orbit the Sun. Indeed, attention is drawn to this difference in another verse:

They stayed in their cave for three hundred years and added nine. (Qur'an, 18:25)

We can clarify the time referred to in the verse thus: 300 years x 11 days (the difference which forms every year) = 3,300 days. Bearing in mind that one solar year lasts 365 days, 5 hours, 48 minutes and 45.5 seconds, 3,300 days/365.24 days = 9 years. To put it another way, 300 years according to the Gregorian calendar is equal to 300+9 years according to the Hijri calendar. As we can see, the verse refers to this finely calculated difference of 9 years. (Allah knows best.) There is no doubt that the Qur'an, which contains such pieces of information, which transcended the everyday knowledge of the time, is a miraculous revelation.

THE FORCE OF GRAVITY AND ORBITAL MOVEMENTS

No! I swear by *the planets-that recede, that ride their course [and] hide themselves*. (Qur'an, 81: 15-16)

The word "*khunnas*" in Surat at-Takwir 15 bears such meanings as shrinking and cowering, retracting and turning back. The Arabic expression translated as "hide themselves" in the 16th verse is *"kunnas,"* the plural form of "*kaanis*," which refers to a specific path: entering a nest, the home of a body in motion, or things entering their homes and hiding there. Again in verse 16, the word "*jawaar*," the plural form of "*jariyah*," which means one that moves and flows, is translated as "that ride their course." Bearing the meanings in mind, it is very possible that these verses refer to the gravitational forces of the planets and their movements around their orbits.

These words in the above verses fully describe orbital movements stemming from the force of gravity. Of these, the word "*khunnas*" refers to the planets' attraction towards their own centres and also their attraction towards the Sun, which is the centre of our Solar System. (Allah knows best.) The force of gravity already existed in the universe-although it was only possible to reveal this attractive force with mathematical formulae with Sir Isaac Newton, who lived in the 17th and 18th centuries. The word "*jawaar*" in the following verse emphasises the orbital movements that arise as a result of the centrifugal force that opposes this attractive one. There is no doubt that the use of the word "*jawaar*" together with "*khunnas*" (attraction towards the centre, shrinkage) and "kunnas" (path, entering the nest, the home of a body in motion) indicates an important scientific truth that nobody could have known about 1,400 years ago. (Allah knows best.) Moreover, these verses, one of the subjects sworn on in the Qur'an, are another indication of the importance of the subject.

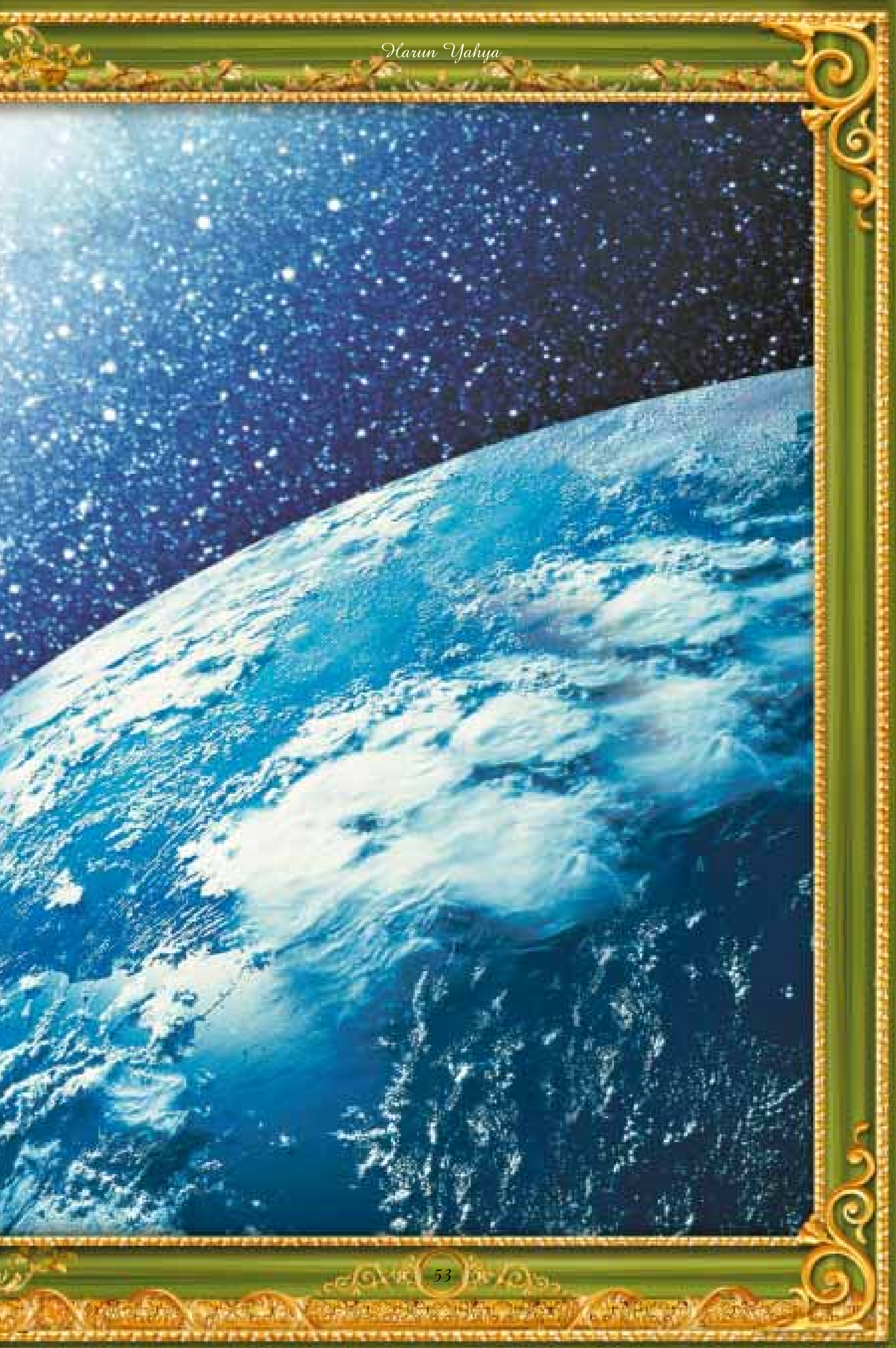


THE SPHERICAL EARTH

He has created the heavens and the Earth for truth. ***He wraps the night up in the day, and wraps the day up in the night.*** **(Qur'an, 39:5)**

In the Qur'an, the words used for describing the universe are quite remarkable. The Arabic word which is translated as "to wrap" in the above verse is "*yukawwir*." In English, it means "to make one thing lap over another, folded up as a garment that is laid away." For instance, in Arabic dictionaries this word is used for the action of wrapping one thing around another, in the way that a turban is put on. The information given in the verse about the day and the night wrapping each other up includes accurate information about the shape of the world. This can be true only if the Earth is round. This means that in the Qur'an, which was revealed in the 7th century, the roundness of the world was hinted at.

However, it should be remembered that the understanding of astronomy of the time perceived the world differently. It was then thought that the world was a flat plane and all scientific calculations and explanations were based on this belief. However, the glorious Qur'an has employed the most definitive words when it came to describing the universe. These facts, which we could only correctly fathom in our century, have been in the Qur'an for a vast length of time.



THE EARTH'S DIRECTION OF ROTATION

***You will see the mountains and reckon them to be solid; but they go past like clouds*-the handiwork of Allah Who gives to everything its solidity. He is aware of what you do. (Qur'an, 27:88)**

The above verse emphasises that the Earth not only rotates but that it also has a direction of rotation. The direction of movement of the main cloud masses at 3,500-4,000 metres (11,500-13,000 feet) high is always from West to East. That is why it is generally the state of the weather in the West which is looked at in meteorological forecasts.[19]

The main reason why cloud masses are pulled from West to East is the direction in which the Earth rotates. As we now know, our Earth spins from West to East. This scientific fact, only recently established by science, was revealed in the Qur'an 1,400 years ago, at a time when the Earth was believed to be flat, and to be resting on the back of an elephant.

THE EARTH'S GEOID SHAPE

After that He *smoothed out* the Earth. (Qur'an, 79:30)

In the above verse, the word "*dahaa*" is used in the original Arabic. It, translated as "smoothed out," comes from the word "*dahaw*," meaning "to spread." Although the word "*dahaw*" also means to cover or to set out, the meaning of the verb is more than just a prosaic setting out, since it describes setting out in a circle.

The concept of roundness is also present in other words derived from "*dahaw*." For example, the word "*dahaw*" also refers to children dropping a ball into a hole in the ground, games involving throwing stones into holes and games played with walnuts. Words derived from that root are also used for an ostrich making a nest, cleaning stones from where it is about to lie down, the place where it lays its eggs and the egg itself.

Indeed, the Earth is round, in a manner reminiscent of an egg. The slightly flattened spherical shape of the Earth is known as geoid. From that point of view, the use of the word "*dahaa*" contains important information about the shape that Allah has given to the Earth. For hundreds of years, people imagined the Earth to be completely flat and only learned the truth thanks to technology. Yet, this fact was revealed in the Qur'an fourteen centuries ago.

THE DIAMETERS OF THE EARTH AND SPACE

Company of jinn and men, if you are able to pierce through *the confines of the heavens and Earth*, pierce through them. You will not pierce through except with a clear authority. (Qur'an, 55:33)

The Arabic word translated as "confines" in the above verse is "*aqtaar.*" This is the plural form of the word "*qutr*," meaning diameter and refers to the skies and the Earth having many diameters. It is possible in Arabic to tell from the form in which a word is used whether it is singular, plural (more than two), or employed in a dual form. Therefore, the form of the word used here, the plural, refers to another piece of miraculous information.

A three-dimensional body can only be said to have a single diameter if it is perfectly spherical. The term "diameters" can only refer to an irregular but basically spherical shape. This word chosen in the Qur'an-diameters-is important from the point of view of indicating the geoid shape of the Earth. The second noteworthy subject in the verse is that the Earth and the heavens are mentioned separately in reference to diameters.

According to Albert Einstein's General Theory of Relativity, the universe is expanding. But this does not mean that the galaxies and other heavenly bodies are being dispersed in space. This means that space is expanding and that the distance between the galaxies is increasing.

The definition of the "**confines of the heavens**" in Surat ar-Rahman 33 indicates the spherical structure of space. (Allah knows best.) In the same way that the diameters of space will be different from different points in space, so the diameters of a constantly expanding space will also display differences. From that point of view the use of the plural form of the word confine is full of wisdom, and is one of the indications that the Qur'an is the revelation of our Omniscient Lord.

ATMOSPHERIC LAYERS

One fact about the universe revealed in the verses of the Qur'an is that the sky is made up of seven layers:

It is He Who created everything on the Earth for you and then directed His attention up to heaven and arranged it into *seven regular heavens*. He has knowledge of all things. (Qur'an, 2:29)

Then He turned to heaven when it was smoke. In two days He determined them as *seven heavens* and revealed, in every heaven, its own mandate. (Qur'an, 41:11-12)

The word "heavens," which appears in many verses in the Qur'an, is used to refer to the sky above the Earth, as well as the entire universe. Given this meaning of the word, it is seen that the Earth's sky, or the atmosphere, is made up of seven layers.

Today, it is known that the world's atmosphere consists of different layers that lie on top of each other.[20] Based on the criteria of chemical contents or air temperature, the definitions made have determined the atmosphere of the Earth as seven layers.[21] According to the "Limited Fine Mesh Model (LFMMII)," a model of atmosphere used to estimate weather conditions for 48 hours, the atmosphere has also 7 layers. According to the modern geological definitions the seven layers of atmosphere are as follows:

1. Troposphere
2. Stratosphere
3. Mesosphere
4. Thermosphere
5. Exosphere
6. Ionosphere
7. Magnetosphere

The Qur'an says, **"[He] revealed, in every heaven, its own mandate**," in Surah Fussilat 12. In other words, Allah is stating that He

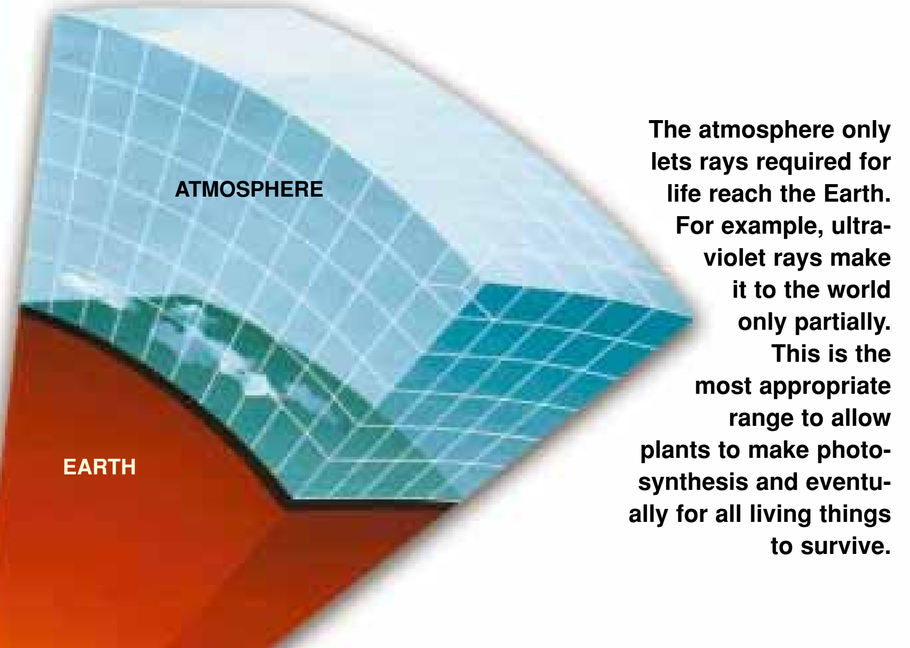
assigned each heaven its own duty. Truly, as will be seen in following chapters, each one of these layers has vital duties for the benefit of human kind and all other living things on the Earth. Each layer has a particular function, ranging from forming rain to preventing harmful rays, from reflecting radio waves to averting the harmful effects of meteors.

The verses below inform us about the appearance of the seven layers of the atmosphere:

Do you not see how He created seven heavens in layers? (Qur'an, 71:15)

He Who created the seven heavens in layers… (Qur'an, 67:3)

The Arabic word "*tibaaq*" in these verses, translated into English as "layer" means "layer, the appropriate cover or covering for something," and thus stresses how the top layer is well suited to the lower. The word is also used in the plural here: "layers." The sky, described in the verse as being in layers, is without doubt the most perfect expression of the atmosphere. It is a great miracle that these facts, which could not possibly be discovered without the technology of the 20th century, were explicitly stated by the Qur'an 1,400 years ago.



The atmosphere only lets rays required for life reach the Earth. For example, ultraviolet rays make it to the world only partially. This is the most appropriate range to allow plants to make photosynthesis and eventually for all living things to survive.

THE WELL-GUARDED SKY

In the Qur'an, Allah calls our attention to a very important attribute of the sky:

***We made the sky a preserved and protected roof* yet still they turn away from Our signs. (Qur'an, 21:32)**

This attribute of the sky has been proved by scientific research carried out in the 20th century: The atmosphere surrounding the Earth serves crucial functions for the continuity of life. While destroying many meteors-big and small-as they approach the Earth, it prevents them from falling to Earth and harming living things.

In addition, the atmosphere filters the light rays coming from space that are harmful to living things. The most striking feature of this function of the atmosphere is that it lets only harmless and useful rays-visible light, near ultraviolet light and radio waves pass through. All of this radiation is vital for life. Near ultraviolet rays, which are only partially let in by the atmosphere, are very important for the photosynthesis of plants and for the survival of all living things. The majority of the intense ultraviolet rays emitted from the Sun are filtered out by the ozone layer of the atmosphere. Only a limited and essential part of the ultraviolet spectrum reaches the Earth.

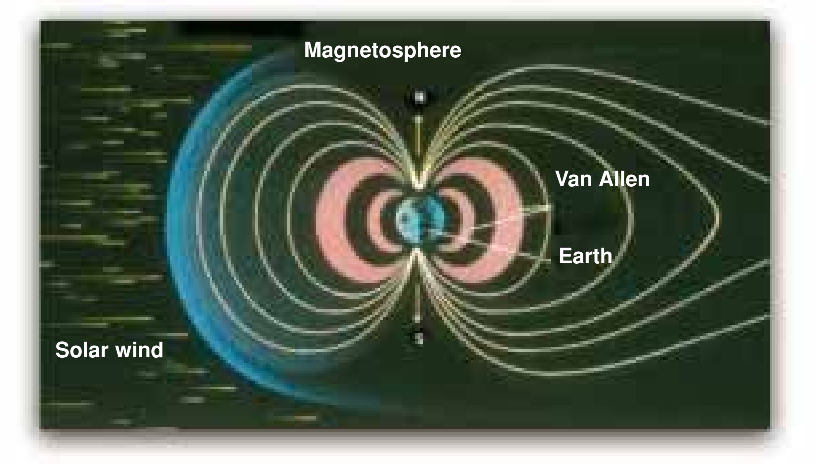
The protective function of the atmosphere does not end here. The atmosphere also protects the Earth from the freezing cold of the space, which is approximately -270ºC (-454ºF).

It is not only the atmosphere that protects the Earth from harmful effects. In addition to the atmosphere, the Van Allen Belt-the layer caused by the magnetic field of the Earth-also serves as a shield against the harmful radiation that threatens our planet. This radiation, which is constantly emitted by the Sun and other stars, is deadly to living things. If the Van Allen belt did not exist, the massive outbursts of energy called solar flares that frequently occur in the Sun would destroy all life

on Earth.

On the importance of the Van Allen Belt, Dr. Hugh Ross says:

> In fact, the Earth has the highest density of any of the planets in our Solar System. This large nickel-iron core is responsible for our large magnetic field. This magnetic field produces the Van-Allen radiation shield, which protects the Earth from radiation bombardment. If this shield were not present, life would not be possible on the Earth. The only other rocky planet to have any magnetic field is Mercury-but its field strength is 100 times less than the Earth's. Even Venus, our sister planet, has no magnetic field. The Van-Allen radiation shield is a design unique to the Earth.[22]



The magnetosphere layer, formed by the magnetic field of the Earth, serves as a shield protecting the Earth from celestial bodies, harmful cosmic rays and particles. In the above picture, this magnetosphere layer, which is also named Van Allen Belts, is seen. These belts at thousands of kilometres above the Earth protect the living things on the Earth from the fatal energy that would otherwise reach it from space.
All these scientific findings prove that the world is protected in a very particular way. The important thing is that this protection was made known in the Qur'an in the verse "We made the sky a preserved and protected roof" fourteen centuries ago.

Most people looking at the sky do not think about the protective aspect of the atmosphere. They almost never think what kind of a place the world would be like if this structure did not exist. The above photo belongs to a giant crater caused by a meteor that fell in Arizona, in the USA. If the atmosphere did not exist, millions of meteoroids would fall to the Earth and the Earth would become an inhabitable place. Yet, the protective aspect of the atmosphere allows living things to survive in safety. This is certainly Allah's protection of people and a miracle proclaimed in the Qur'an.

The energy transmitted in just one of these bursts detected in recent years was calculated to be equivalent to 100 billion atomic bombs, each akin to one dropped on Hiroshima at the end of World War II. Fifty-eight hours after the burst, it was observed that the magnetic needles of compasses displayed unusual movement and 250 kilometres (155 miles) above the Earth's atmosphere, the temperature suddenly increased to 2,500ºC (4,532ºF).

In short, a perfect system is at work high above the Earth. It surrounds our world and protects it against external threats. Centuries ago, Allah informed us in the Qur'an of the world's atmosphere functioning as a protective shield.

THE SKY MADE A DOME

It is He Who made the Earth a couch for you, and *the sky a dome*. He sends down water from the sky and by it brings forth fruits for your provision. Do not, then, knowingly make others equal to Allah. (Qur'an, 2:22)

Here, the sky is described as "*al-samaa' binaa'*." As well as the meaning of "dome" or "ceiling," this also describes a kind of tent-like covering used by the Bedouin.[23] By describing the sky as a tent-like structure, the Qur'an is emphasizing that it is a form of protection against external elements.

Even if we are generally unaware of it, a large number of meteors fall to the Earth, as they do to the other planets. The reason why these make enormous craters on other planets but do no harm on Earth is that the atmosphere puts up considerable resistance to a falling meteor. The meteor is unable to withstand this for long and loses much of its mass from combustion due to friction. This danger, which might otherwise cause terrible disasters, is thus prevented thanks to the atmosphere. As well as the verses regarding the protective properties of the atmosphere cited above, attention is also drawn to the special creation in the following verse:

Don't you see that Allah has made everything on the Earth subservient to you and the ships running upon the sea by His command? *He holds back the heaven, preventing it from falling to the Earth-except by His permission*. Allah is All-Compassionate to humanity, Most Merciful. (Qur'an, 22:65)

The protective property of the atmosphere we discussed in the preceding section protects the Earth from space-in other words, from external elements. With the word "dome," referring to the sky in the above verse, attention is drawn to this aspect of the sky, which could not possibly have been known at the time of our Prophet (saas). The

fact that this information was imparted 1,400 years ago in the Qur'an, when there were no spacecraft or giant telescopes, shows that the Qur'an is the revelation of our Lord, the Omniscient.

The Geminid meteor shower is observed at its highest intensity in the second week of December each year. The short lines in the photograph to the side are traces belonging to stars; the long ones belong to meteors. The meteors in the shower seen in the picture fall at a density of up to 58 per hour.

THE SKY THAT RETURNS

The verse 11 of Surat at-Tariq in the Qur'an, refers to the "returning" function of the sky.

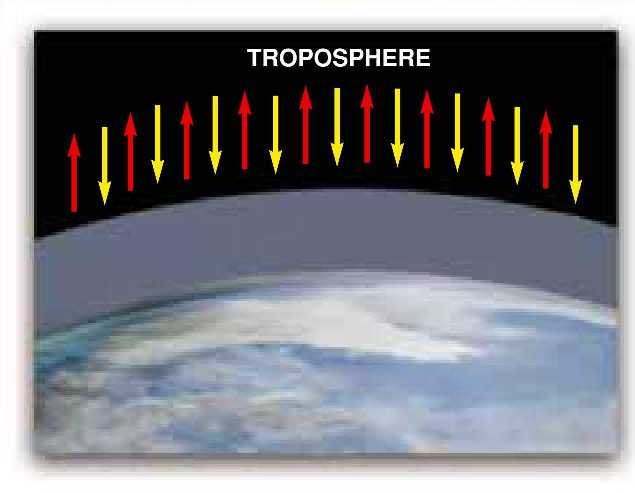
[I swear] by heaven which returns. (Qur'an, 86:11)

The word "*raj`*" interpreted as "return" in Qur'an translations has meanings of "sending back" or "returning." As is known, the atmosphere surrounding the Earth consists of many layers. Each layer serves an important purpose for the benefit of life on Earth. Research has revealed that these layers have the function of turning the materials or rays they are exposed to back into space or back down to the Earth. Now let us examine, employing a few fitting examples, this "returning" function of the layers encircling the Earth.

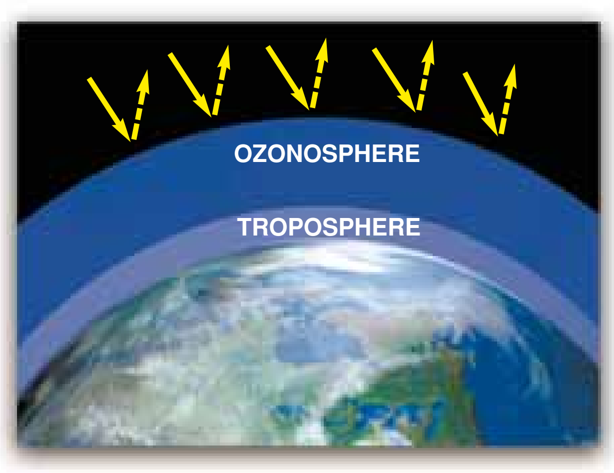
The troposphere, 13 to 15 kilometres (8 to 9.3 miles) above the Earth, enables water vapour rising from the surface of the Earth to be condensed and turned back as rain. The ozone layer, the lower layer of stratosphere at an altitude of 25 kilometres (15.5 miles), reflects harmful radiation and ultraviolet light coming from space and turns both back into space.

The ionosphere reflects radio waves broadcast from the Earth back down to different parts of the world just like a passive communications satellite. Thus, it makes wireless communication, radio, and television broadcasting possible over long distances. The magnetosphere layer turns the harmful radioactive particles emitted by the Sun and other stars back into space before they reach the Earth.

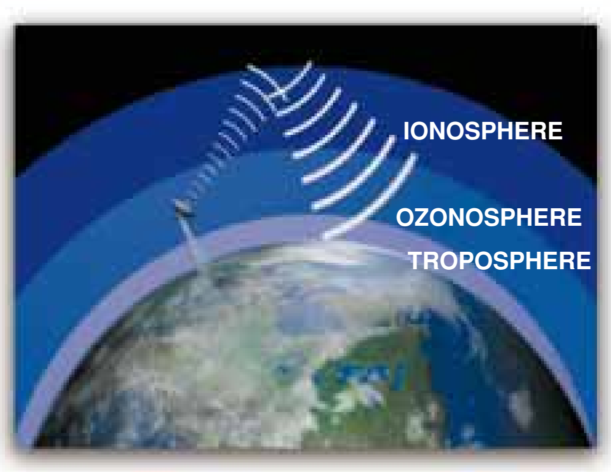
The fact that this property of the atmosphere's layers, that was only demonstrated in the recent past was announced centuries ago in the Qur'an, once again confirms that the Qur'an is Allah's word.



The presence of water is essential for life on Earth. One of the factors acting in the formation of water is the Troposphere, one of the layers of the atmosphere. The troposphere layer enables water vapour rising from the surface of the Earth to be condensed from whence it returns to the Earth in the form of rain.



The atmosphere layer that blocks the rays that might be fatal to life on Earth is the Ozonosphere. The Ozonosphere turns harmful cosmic rays like ultraviolet back to space, hence preventing them from reaching the Earth and harming life.



Each layer of the atmosphere has beneficial attributes for human beings. For example, the Ionosphere layer, one of the upper layers of the atmosphere, reflects radio waves broadcast from a certain centre back down to the Earth, thus enabling broadcasts to be received from long distances.

THE LAYERS OF THE EARTH

One item of information about the Earth given in the Qur'an is its similarity to the seven-layered sky:

It is Allah Who created *the seven heavens and of the Earth the same number,* the command descending down through all of them, so that you might know that Allah has power over all things and that Allah encompasses all things in His knowledge. (Qur'an, 65:12)

The information in the above verse is confirmed in scientific sources, wherein it is explained that the Earth consists of seven strata. These, as scientists have identified, are:

1st layer: Lithosphere (water)

2nd layer: Lithosphere (land)

3rd layer: Asthenosphere

4th layer: Upper Mantle

5th layer: Inner Mantle

6th layer: Outer Core

7th layer: Inner Core

The word lithosphere is derived from the Greek word *lithos,* meaning stone, which is a hard stratum forming the Earth's top layer. It is quite thin in comparison to the other strata. The lithosphere under the oceans is still thinner, and is a region with volcanic activity. Its average thickness is 80 km (49.7 miles). It is colder and harder than the other strata, and therefore, forms the Earth's shell.

Below the lithosphere is the stratum known as the asthenosphere, from the Greek word for "weak," *asthenes*. This layer is thinner than the lithosphere and shifts. It was formed of hot, semi-solid substances capable of melting when exposed to high temperatures and pressure over geological time. It is thought that the hard lithosphere floats or moves over the slowly moving asthenosphere.[24] Under these layers is a high-temperature layer some 2,900 km (1,800 miles) thick, made up of

semi-solid rock known as the mantle. This contains more iron, magnesium and calcium than the crust, and is also hotter and denser, because temperature and density in the Earth increase with depth.

At the centre of the Earth is the core, approximately twice as dense as the mantle. The reason for that density is that it contains a higher proportion of metals (iron-nickel alloy) than rock. The Earth's core consists of two parts. One is the 2,200 km (1,370 miles) thick liquid outer core, the other a 1,250 km (777 miles) thick solid inner core. The liquid outer core provides the Earth's magnetic field as the planet rotates.

The truth of this similarity between the sky and the layers of the Earth, only identified by 20th century technology, is without doubt another of the Qur'an's scientific miracles.

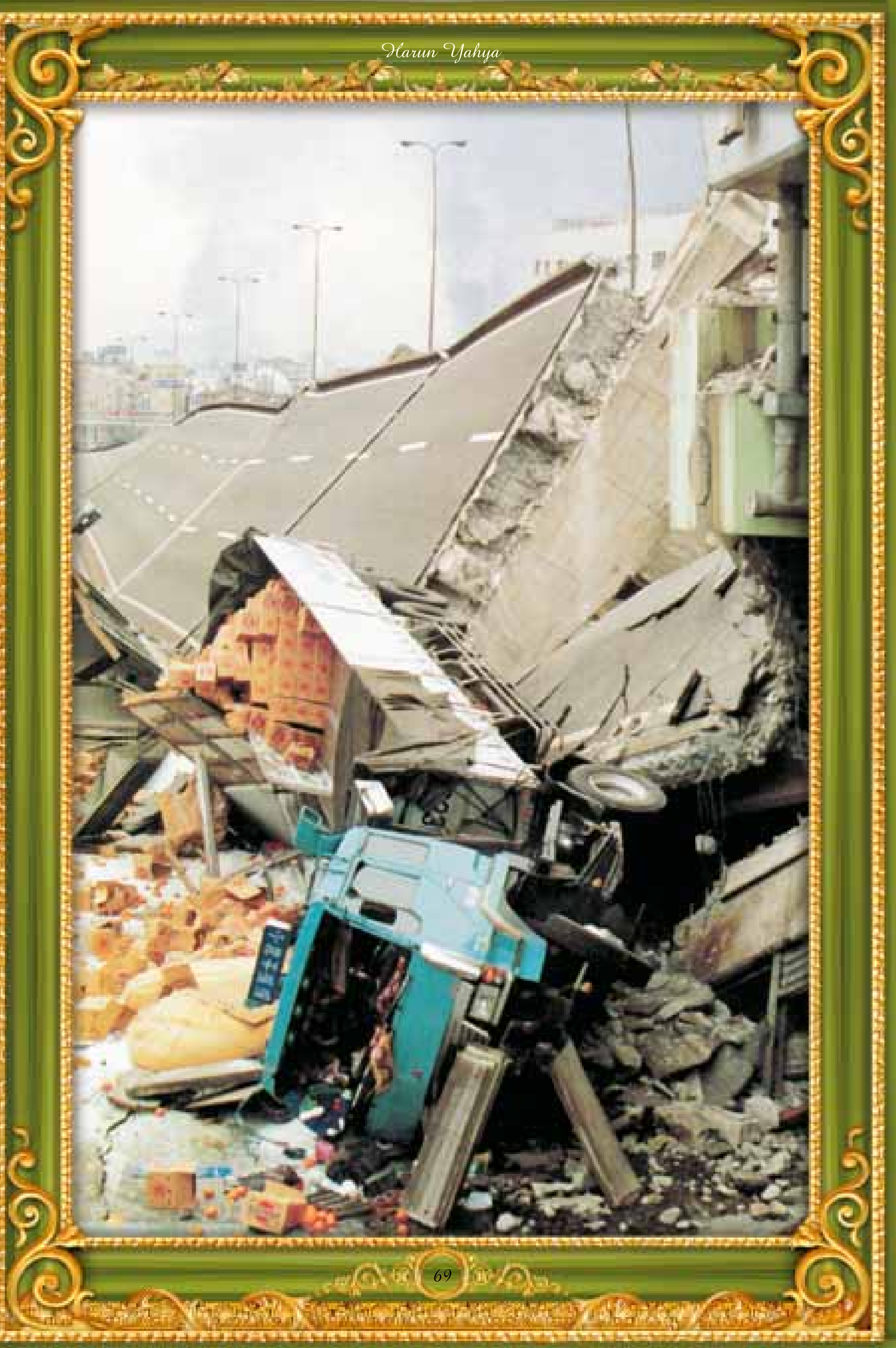
THE EARTH DISGORGES ITS CHARGES

When the Earth is convulsed with its quaking and the Earth then disgorges its charges and man asks, "What is wrong with it?", on that day it will impart all its news. (Qur'an, 99:1-4)

The word "*zilzaal*" in Arabic means earthquake, or tremors, and the word "*athqaalahaa*" means "charges, heavy burdens." When one considers the above verses in the light of the first meaning, it can be seen that reference is being made to an important scientific fact about earthquakes.

Surat az-Zilzal 2 mentions the Earth disgorging its charges. Indeed, as a result of research in recent years, it has been realised that there are heavy metals at the centre of the Earth, and that these appear as a result of movements on the Earth's surface. According to geologists' calculations, as the Earth cooled, heavy and dense substances sank to its centre, while lighter ones rose to the surface. For that reason, the Earth's crust consists of the least heaviest substances (basalt and granite rocks), while heavy metals (nickel and iron) are found in the core. As a result, the subsurface, which consists of molten metals, is made of a material that is much heavier and denser than the surface.

During earthquakes, the heavy substances below the surface have an opportunity to rise, and the Earth thus disgorges its charges, as revealed in the Qur'an. Moreover, those regions where metal reserves are most concentrated are also those with the greatest volcanic activity. These scientific findings, which emerged only recently, and as a result of wide-ranging research, are just some of the scientific facts indicated by Allah in the Qur'an.



MOUNTAINS' ROLE

The Qur'an draws attention to a very important geological function of mountains:

We placed firmly embedded mountains on the Earth, so it would not move under them… (Qur'an, 21:31)

The verse states that mountains perform the function of preventing shocks in the Earth. This fact was not known by anyone at the time the Qur'an was revealed. It was, in fact, brought to light only recently, as a result of the findings of modern geological research.

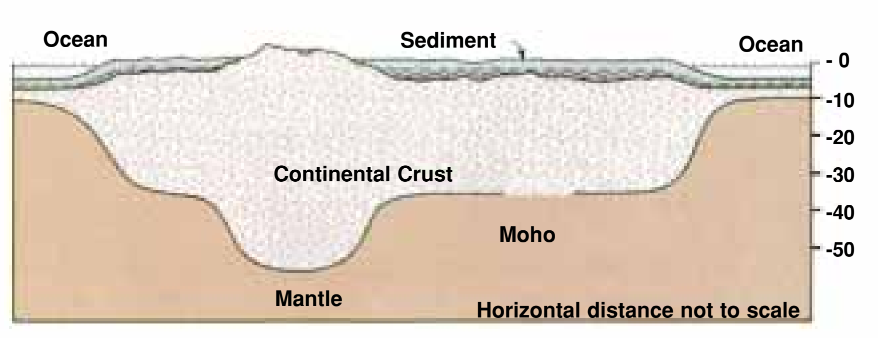
Formerly, it was thought that mountains were merely protrusions rising above the surface of the Earth. However, scientists realised that this was not actually the case, and that those parts known as the mountain root extended down as far as 10-15 times their own height. With these features, mountains play a similar role to a nail or peg firmly holding down a tent. For example, Mount Everest, the summit of which stands approximately 9 km above the surface of the Earth, has a root deeper than 125 km (77.7 miles).[25]

Mountains emerge as a result of the movements and collisions of massive plates forming the Earth's crust. When two plates collide, the stronger one slides under the other, the one on the top bends and forms heights and mountains. The layer beneath proceeds under the ground and makes a deep extension downward. Consequently, as stated earlier, mountains have a portion stretching downwards, as large as their visible parts on the Earth.

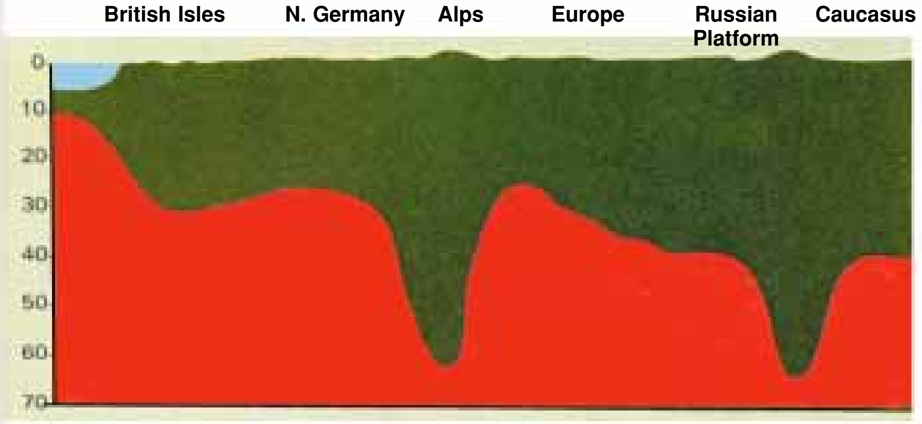
In a scientific text, the structure of mountains is described as follows:

Where continents are thicker, as in mountain ranges, the crust sinks deeper into the mantle.[26]

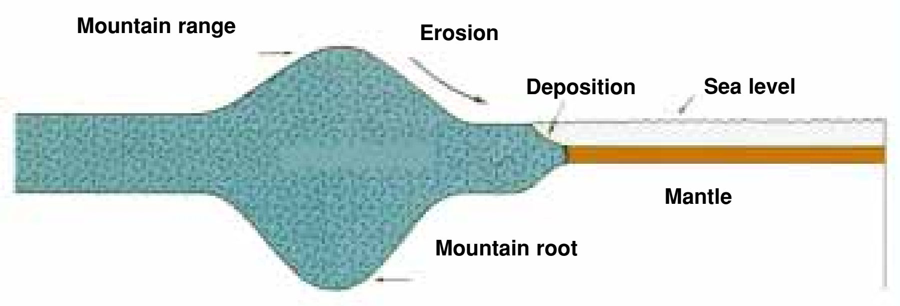
Professor Siaveda, a world-renowned underwater geologist, made the following comment in reference to the way that mountains have



Mountains have roots deep under the surface of the ground. (Frank Press, and Raymond Siever, *Earth*, 3rd ed. [San Francisco: W. H. Freeman & Company: 1982], 413.)



Schematic section. Mountains, like pegs, have deep roots embedded in the ground. (Andre Cailleux and J. Moody Stuart, *Anatomy of the Earth* [McGraw-Hill Companies: 1968], 220.)



Another illustration shows how mountains are peg-like in shape, due to their deep roots. (Edward J. Tarbuck and Frederick K. Lutgens, *Earth Science* [USA: Macmillan USA: 1993], 158.)

root-like stalks attaching them to the surface:

> The fundamental difference between continental mountains and the oceanic mountains lies in its material... *But the common denominator on both mountains are that they have roots to support the mountains. In the case of continental mountains, light-low density material from the mountain is extended down into the earth as a root. In the case of oceanic mountains, there is also light material supporting the mountain as a root...* Therefore, the function of the roots are to support the mountains according to the law of Archimedes.[27]

Furthermore, a book titled *Earth*, by Dr. Frank Press, former president of the U.S. National Academy of Sciences, which is still used as a text book in a great many universities, states that mountains are like stakes, and are buried deep under the surface of the Earth.[28]

In other verses, this role of the mountains is pointed out by a comparison with "pegs":

> **Haven't We made the Earth as a bed and the mountains its pegs? (Qur'an, 78:6-7)**

In another verse it is revealed that Allah "**made the mountains firm.**" (Qur'an, 79:32) The word "*arsaahaa*" in this verse means "was made rooted, was fixed, was nailed to the earth." Similarly, mountains extend to the surface layer joining lines on and below the surface, and nail these together. By fixing the Earth's crust they prevent any sliding over the magma layer or amongst the layers themselves. In short, mountains can be compared to nails holding strips of wood together. The fixing effect of mountains is known as isostasy in scientific literature. Isostasy is the state of equilibrium between the upward force created by the mantle layer and the downward force created by the Earth's crust. As mountains lose mass due to erosion, soil loss or melting of glaciers, they can gain mass from the formation of glaciers, volcanic explosions or soil formation. Therefore, as mountains grow lighter they are pressed upwards by the raising force implemented by the liquids. Alternatively, as they grow heavier they are pressed into the mantle by the force of gravity. Equilibrium between these two forces is established

by isostasy. This balancing property of mountains is described in these terms in a scientific source:

> G.B Airy in 1855 suggested that the crust of the earth could be likened to rafts of timber floating on water. Thick pieces of timber float higher above the water surface than thin pieces and similarly thick sections of the earth's crust will float on a liquid or plastic substratum of greater density. Airy was suggesting that mountains have a deep root of lower density rock which the plains lack. Four years after Airy published his work, J.H Pratt offered an alternative hypothesis... By this hypothesis rock columns below mountains must have a lower density, because of their greater length, than shorter rock columns beneath plains. Both Airy and Pratt's hypothesis imply that surface irregularities are balanced by differences in density of rocks below the major features (mountains and plains) of the crust. This state of BALANCE is described as the concept of ISOSTASY. [29]

Today, we know that the rocky external layer of the Earth's surface is riven by deep faults and split into plates swimming above the molten lava. Since the Earth revolves very quickly around its own axis, were it not for the fixing effect of the mountains, these plaques would shift. In such an event, soil would not collect on the Earth's surface, water would not accumulate in the soil, no plants could grow, and no roads or houses could be built. In short, life on Earth would be impossible. Through the mercy of Allah, however, mountains act like nails, and to a large extent, prevent movement in the Earth's surface.

This vital role of mountains, which has been discovered by modern geological and seismic research, was revealed in the Qur'an centuries ago as an example of the supreme wisdom in Allah's creation.

> **… [He] cast firmly embedded mountains on the Earth so that it would not move under you… (Qur'an, 31:10)**

THE MOVING MOUNTAINS

In one verse, we are informed that mountains are not motionless as they seem, but are in constant motion.

You see the mountains you reckoned to be solid going past like clouds. (Qur'an, 27:88)

This motion of mountains is caused by the movement of the Earth's crust that they are located on. The Earth's crust "floats" over the mantle layer, which is denser. It was at the beginning of the 20th century when, for the first time in history, a German scientist by the name of Alfred Wegener proposed that the continents of the Earth had been attached together when it first formed, but then drifted in different directions, and thus separated as they moved away from each other.

Geologists understood that Wegener was right only in the 1980s, 50 years after his death. As Wegener pointed out in an article published in 1915, the land masses on the Earth were joined together about 500 million years ago, and this large mass, called Pangaea, was located in the South Pole.

Approximately 180 million years ago, Pangaea divided into two parts, which drifted in different directions. One of these giant continents was Gondwana, which included Africa, Australia, Antarctica and India. The second one was Laurasia, which included Europe, North America and Asia, except for India. Over the next 150 million years following this separation, Gondwana and Laurasia divided into smaller parts.

These continents, that emerged after the split of Pangaea, have been constantly moving on the Earth's surface at a rate of several centimetres per year, and in the meantime changing the sea to land ratios of the Earth.

Discovered as a result of the geological research carried out at the beginning of the 20th century, this movement of the Earth's crust is

explained by scientists as follows:

> The crust and the uppermost part of the mantle, with a thickness of about 100 kms., are divided into segments called plates. There are six major plates, and several small ones. According to the theory called plate tectonics, these plates move about on Earth, carrying continents and ocean floor with them. Continental motion has been measured at from 1-5 cm per year. As the plates continue to move about, this will produce a slow change in Earth's geography. Each year, for instance, the Atlantic Ocean becomes slightly wider.[30]

There is an important point that needs to be stated here: Allah referred to the motion of mountains as drifting in a verse of the Qur'an. Today, modern scientists also use the term "continental drift" for this motion.[31]

Continental drift is something that could not have been observed at the time of the revelation of the Qur'an, and Allah clearly indicated how it was to be understood: "**You see the mountains you reckoned to be solid.**" Though, He described a fact afterward, stating that the mountains were going past like clouds. As has been indicated, attention is clearly drawn to the movement of the layer in which the mountains are fixed.

It is without doubt a great miracle that this scientific fact, only recently discovered by science, should have been revealed in the 7th century, when conceptions of the nature of the universe were based on superstition and myth. This is another very important proof that the Qur'an is the word of Allah.

DIFFERENT POINTS IN THE RISING AND SETTING OF THE SUN

No! I swear by *the Lord of the easts and wests* that We have the power. (Qur'an, 70:40)

Lord of the heavens and the Earth and everything between them; *Lord of the easts*. (Qur'an, 37:5)

***The Lord of the two easts and the Lord of the two wests*. (Qur'an, 55:17)**

As can be discerned, the words east and west are used in the plural sense in the above verses. For instance, the word "*mashaariq*," used in the first verse for "east," and the word "*maghaarib*" used for "west," are in plural form, indicating that there are two of each. The words "*mashriqayn*" and "*maghribayn*" in the last verse are used for two easts



and two wests. "*Mashaariq*" and "*maghaarib*" also mean the place where the Sun rises and sets. The above verses are therefore referring to different sites of the dawning and closing of the day. It is also worthy of note that the vow is taken by the Lord of "the easts and wests" in the first verse.

The axis around which the Earth revolves itself is at an angle of 23˚ 27'. Due to that angle, and the spherical shape of the Earth, the light rays from the Sun do not always strike it at the same angle. This means that the Sun rises at different points in the east and sets at different points in the west.

That the expressions regarding east and west in the above verses indicate the Sun rising and setting at different points reveals a great wisdom. (Allah knows best.)



LAND LOSS AT THE EXTREMITIES

Don't they see how We come to the land eroding it at its extremities?... (Qur'an, 13:41)

... Don't they see how We come to the land eroding it from its extremities?... (Qur'an, 21:44)

The Earth is bombarded by proton, electron and alpha particles from the Sun. These solar winds are powerful enough to separate the atmosphere from the Earth. However, it will take about five times longer than the total life of the Sun at the Earth's present rate of matter loss (at most 3 kg [6.6 lbs] per second) for the atmosphere to be used up.[32] That is because, thanks to the powerful magnetic field formed by the magnetosphere in the atmosphere, the Earth is to some extent protected from this powerful erosion. The loss of ions-oxygen, helium and hydrogen-dispersed over the Earth's ionosphere layer into the depths of space is of much smaller dimensions than the vast layer of air surrounding the Earth. Even so, the amount leaking into space is nevertheless of a significant size.[33]

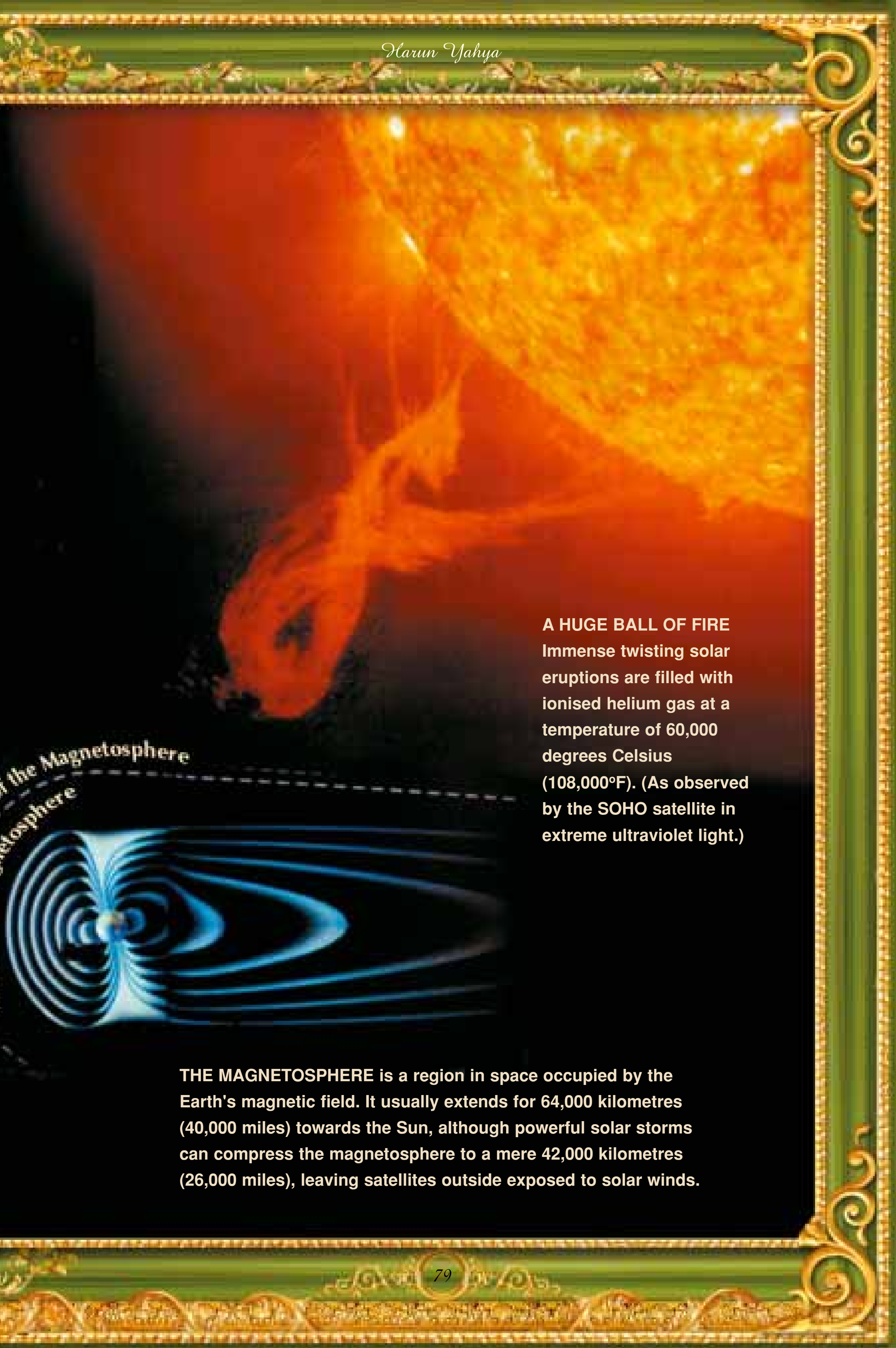
Activity in the Sun reaches its highest point once every 11 years. Throughout this period, the Sun rains high energy particles and radiation down on Earth.

8 minutes
Ultraviolet and x-ray emissions travelling at the speed of light can block out radio broadcasts.

30 minutes
Charged particles at a high energy level can threaten satellites and high-flying jets.

Between 48 minutes and 96 hoursı
The Earth's magnetic field is disrupted by mass solar particles. The effect of this is to endanger electricity networks.

Normal shape



A HUGE BALL OF FIRE
Immense twisting solar eruptions are filled with ionised helium gas at a temperature of 60,000 degrees Celsius (108,000ºF). (As observed by the SOHO satellite in extreme ultraviolet light.)

THE MAGNETOSPHERE is a region in space occupied by the Earth's magnetic field. It usually extends for 64,000 kilometres (40,000 miles) towards the Sun, although powerful solar storms can compress the magnetosphere to a mere 42,000 kilometres (26,000 miles), leaving satellites outside exposed to solar winds.

Thanks to NASA spacecraft, researchers have obtained concrete evidence that energy explosions on the Sun cause oxygen and other gases to disperse into space from the outer layer of the Earth's atmosphere. Scientists first observed that the Earth experiences a loss of matter from its outer layers on September 24-25, 1998.[34]

However, the above verses may also be referring to the loss of land on Earth in another regard.

At the present time, the polar ice caps are melting and the water level in the oceans is rising. The increasing quantity of water is covering ever more land. As coastal areas come under water, the land surface or total amount of land is decreasing.[35] The expression "eroding it from its extremities" in the above verses may well be pointing to coastal areas being covered by water.

A *New York Times* report on this subject reads:

> Over the last century, the average surface temperature of the globe has risen by about 1 degree Fahrenheit, and the rate of warming has accelerated in the last quarter-century. That is a significant amount… Previous studies of satellite and submarine observations have seemed to establish a warming trend in the northern polar region and raise the possibility of a melting icecap. Scientists at the Goddard Space Science Institute, a NASA research center in Manhattan, compared data from submarines in the 1950's and 1960's with 1990's observations, demonstrating that the ice cover over the entire Arctic basin has thinned by 45 percent. Satellite images have revealed that the extent of ice coverage has significantly shrunk in recent years.[36]

The findings made towards the end of the 20th century help us to understand the wisdom of Surat ar-Ra'd 41, and Surat al-Anbiya' 44.

This loss at the extremities, as revealed by Allah, may be understood in light of another scientific fact revealed in the Qur'an. The fact that the Earth, which revolves around its own axis, has a geoid shape, is a fact that has gained acceptance in recent centuries.

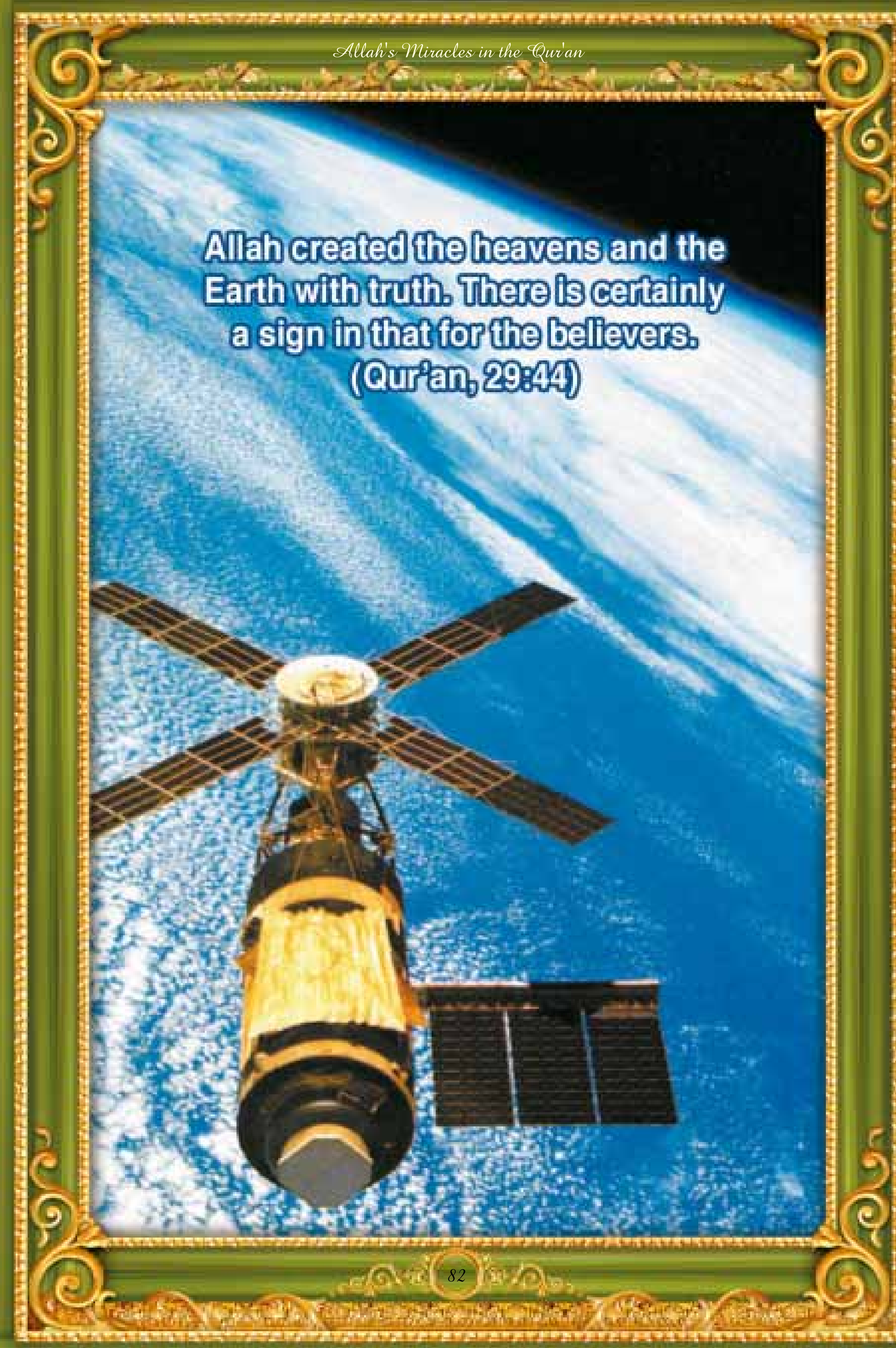
Research has revealed that the equatorial diameter of the Earth

expands under the effect of the force stemming from this rotation, and that it is compressed at its extremities, in other words the poles. Furthermore, since the Earth is in constant rotation this change continues to occur. Indeed, the term "*nanqusu*" in Surat ar-Ra'd 41, translated as "eroding," shows that this process of erosion is an ongoing one.

It is the force of gravity that has given such celestial bodies as the Earth their spherical form. However, that shape is not exactly spherical; it flattens out somewhat at the poles and thickens at the equator. According to NASA figures, the radius of the Earth is 6,378.1 km (3,963.2 miles) at the equator but only 6,356.8 km (3,949.9 miles) from pole to pole.[37] This is a difference of some 0.3%.

This model of the shape of the Earth was suggested by Sir Isaac Newton in 1687. This fact, revealed in the Qur'an 1,400 years ago, is another of its scientific miracles.

Research has revealed that the Earth keeps bulging at the equator.


Allah created the heavens and the Earth with truth. There is certainly a sign in that for the believers.
(Qur'an, 29:44)

THE SPLITTING EARTH

[I swear] by heaven which returns and the Earth which splits. (Qur'an, 86:11-12)

The Arabic word "*sad`*" in the above verse means "cracking, splitting apart." Allah's swearing by the splitting of the Earth points to an important phenomenon, as do the other scientific miracles in the Qur'an. Scientists first descended to the depths of the seas and oceans in order to study mineral resources in 1945-1946. One of the most important facts to emerge from that research was the fissured structure of the Earth. The rock layer on the external surface of the Earth was split by large numbers of cracks (faults), tens of thousands of kilometres long, running from north to south and east to west. Scientists also realised that there was molten magma under the sea, at depths of 100-150 km (60-90 miles).

Due to these splits and cracks, lava flows from volcanoes on the sea bed. Due to this fissured structure, a significant amount of heat is also given off, and a large part of molten rocks forms the mountains under the oceans. If the Earth did not possess this structure, which allows large amounts of heat to escape from its crust, life on Earth would become impossible.[38]

There is no doubt that such information, which required such advanced technology to be discovered, being given 1,400 years ago is yet another proof that the Qur'an is the word of Allah.

The above representative pictures show the fragmented structure of the Earth. The magma layer under the Earth's crust is allowed to escape to the surface by this fragmented structure. This significantly reduces the temperature of the Earth.

THE MIRACULOUS IRON

Iron is one of the elements highlighted in the Qur'an. In Surat al-Hadid, meaning "iron," we are informed:

And We also *sent down iron* in which there lies great force and which has many uses for mankind… (Qur'an, 57:25)

The word "*anzalnaa*," translated as "We sent down" and used for iron in the verse, could be thought of having a metaphorical meaning to explain that iron has been given to benefit people. But, when we take into consideration the literal meaning of the word, which is, "being physically sent down from the sky," as in the case of rain and Sun rays, we realize that this verse implies a very significant scientific miracle. Because, modern astronomical findings have disclosed that the iron found in our world has come from giant stars in outer space.[39]

Not only the iron on Earth, but also the iron in the entire Solar System, comes from outer space, since the temperature in the Sun is inadequate for the formation of iron. The Sun has a surface temperature of 6,000 degrees Celsius (11,000°F), and a core temperature of approximately 20 million degrees (36 million degrees Fahrenheit). Iron can only be produced in much larger stars than the Sun, where the temperature reaches a few hundred million degrees. When the amount of iron exceeds a certain level in a star, the star can no longer accommodate it, and it eventually explodes in what is called a "nova" or a "supernova." These explosions make it possible for iron to be given off into space.[40]

One scientific source provides the following information on this subject:

> There is also evidence for older supernova events: Enhanced levels of iron-60 in deep-sea sediments have been interpreted as indications that a supernova explosion occurred within 90 light-years of the sun about 5 million years ago. Iron-60 is a radioactive isotope of iron, formed in

supernova explosions, which decays with a half life of 1.5 million years. **An enhanced presence of this isotope in a geologic layer indicates the recent nucleosynthesis of elements nearby in space and their subsequent transport to the earth (perhaps as part of dust grains).**[41]

All this shows that iron did not form on the Earth, but was carried from supernovas, and was "sent down," as stated in the verse. It is clear that this fact could not have been known in the 7th century, when the Qur'an was revealed. Nevertheless, this fact is related in the Qur'an, the word of Allah, Who encompasses all things in His infinite knowledge.

Astronomy has also revealed that other elements also formed outside the Earth. In the expression "**We also sent down iron**" in the verse, the word "also" may well be referring to that idea. However, the fact that the verse specifically mentions iron is quite astounding, considering that these discoveries were made at the end of the 20th century. In his book *Nature's Destiny*, the well-known microbiologist Michael Denton emphasizes the importance of iron:

Of all the metals there is none more essential to life than iron. It is the accumulation of iron in the center of a star which triggers a supernova explosion and the subsequent scattering of the vital atoms of life throughout the cosmos. It was the drawing by gravity of iron atoms to the center of the primeval earth that generated the heat which caused the initial chemical differentiation of the earth, the outgassing of the early atmosphere, and ultimately the formation of the hydrosphere. It is molten iron in the center of the earth which, acting like a gigantic dynamo, generates the earth's magnetic field, which in turn creates the Van Allen radiation belts that shield the earth's surface from destructive high-energy-penetrating cosmic radiation and preserve the crucial ozone layer from cosmic ray destruction…

Without the iron atom, there would be no carbon-based life in the cosmos; no supernovae, no heating of the primitive earth, no atmosphere or hydrosphere. There would be no protective magnetic field, no Van Allen radiation belts, no ozone layer, no metal to make hemoglobin [in human

> blood], no metal to tame the reactivity of oxygen, and no oxidative metabolism.
>
> The intriguing and intimate relationship between life and iron, between the red color of blood and the dying of some distant star, not only indicates the relevance of metals to biology but also the biocentricity of the cosmos…[42]

This account clearly indicates the importance of the iron atom. The fact that particular attention is drawn to iron in the Qur'an also emphasises the importance of the element. In addition, there is another hidden truth in the Qur'an which draws attention to the importance of iron: Surat al-Hadid 25, which refers to iron, contains two rather interesting mathematical codes.

"Al- Hadid" is the 57th sura in the Qur'an. The *abjad* of the word "Al-Hadid" in Arabic, when the numerological values of its letters are added up, is also 57. (For *abjad* calculations see the section on Numerological Calculations (*Abjad*) in the Qur'an.)

The numerological value of the word "*hadid*" alone is 26. And 26 is the atomic number of iron.

Moreover, iron oxide particles were used in a cancer treatment in recent months and positive developments were observed. A team led by Dr. Andreas Jordan, at the world famous Charité Hospital in Germany, succeeded in destroying cancer cells with this new technique developed for the treatment of cancer-magnetic fluid hyperthermia (high temperature magnetic liquid). As a result of this technique, first performed on the 26-year-old Nikolaus H., no new cancer cells were observed in the patient in the following three months.

This method of treatment can be summarised as follows:

1- A liquid containing iron oxide particles is injected into the tumour by means of a special syringe. These particles spread throughout the tumour cells. This liquid consists of thousands of millions of particles, 1,000 times smaller than the red blood corpuscles, of iron oxide in 1 cm^3 that can easily flow through all blood vessels.[43]

2- The patient is then placed in a machine with a powerful magnetic field.

3- This magnetic field, applied externally, begins to set the iron particles in the tumour in motion. During this time the temperature in the tumour containing the iron oxide particles rises by up to 45 degrees Celsius (113ºF).

4- In a few minutes the cancer cells, unable to protect themselves from the heat, are either weakened or destroyed. The tumour may then be completely eradicated with subsequent chemotherapy.[44]

In this treatment it is only the cancer cells that are affected by the magnetic field, since only they contain the iron oxide particles. The spread of this technique is a major development in the treatment of this potentially lethal disease. In the treatment of such a widespread disease as cancer, the use of the expression "**iron in which there lies great force and which *has many uses for humanity***" (Qur'an, 57:25) in the Qur'an is particularly noteworthy. Indeed, in that verse, the Qur'an may be indicating the benefits of iron for human health. (Allah knows best.)



Surat al-Hadid is the 57th in the Qur'an. The numerical value of the word "al-Hadid" in Arabic is 57. The numerical value of "hadid" on its own is 26. As can be seen from the periodic table to the side, 26 is the number of the iron atom. With the verse revealed in Surat al-Hadid Almighty Allah indicates how iron formed, and with the mathematical code contained in the verse He reveals to us a scientific miracle.

THE FORMATION OF PETROL

Glorify the Name of your Lord, the Most High: He Who created and moulded; He Who determined and guided; He Who *brings forth green pasture, then makes it blackened stubble.* (Qur'an, 87:1-5)

As we know, petrol forms from the remains of plants and animals in the sea. Once these have decayed on the sea bed after millions of years, all that is left are oily substances. These, under layers of mud and rock, then turn into petrol and gas. Movements in the Earth's crust sometimes lead to the sea petrifying and to the rocks containing petrol being buried thousands of metres deep. The petrol that forms sometimes leaks through the pores in the rock layers from several kilometres down, and rises to the surface, where it vaporises (turns into gas), leaving a mass of bitumen behind.

The three elements identified in the first four verses of Surat al-A'la parallel the formation of petroleum. It is quite likely that the term "*mar`aa*," meaning "pasture or meadow," refers to the organically-based substances in the formation of petroleum. The second word of note in the verse is "*ahwaa*," used to describe blackish-green, greenish-black, dark or sooty colours. This word can be thought of as describing the waste plant matter accumulated underground gradually turning black, since these words are supported by a third word, "*ghuthaa'*." The word "*ghuthaa'*" translated as "stubble," can also mean "flood-water plants, plants brought together by waste matter being collected and dispersed around valleys, rubbish, leaves or foam." In addition to the connotation of "vomiting out" implied in the word, it may also be translated as "to flood forth vomited matter," and describes the way that the earth "vomits" forth petroleum. In fact, in the light of the formation of petroleum, the way it emerges, its foam-like appearance and its colour, one can better see with what wisdom were employed the words in the verses.

As has been discussed, the plant in the verse turning into a dark

and viscous liquid bears a strong resemblance to the formation of petroleum. The description of such a formation over many years, at a time when the formation of petroleum was unknown, is without doubt another proof that the Qur'an is the revelation of Allah.



Petrol platform

THE RELATIVITY OF TIME

Today, the relativity of time is a proven scientific fact. This was revealed by Einstein's theory of relativity during the early part of the 20th century. Until then, it was not known that time was relative, nor that it could change according to the circumstances. Yet, the renowned scientist Albert Einstein proved this fact by discovering the theory of relativity. He showed that time is dependent on mass and velocity.

However, the Qur'an had already included information about time's being relative! Some verses about the subject read:

***… A day with your Lord is equivalent to a thousand years in the way you count.* (Qur'an, 22:47)**

He directs the whole affair from heaven to Earth. Then it will again ascend to Him on *a day whose length is a thousand years by the way you measure.* (Qur'an, 32:5)

The angels and the spirit ascend to Him in *a day whose length is fifty thousand years.* (Qur'an, 70:4)

The fact that the relativity of time is so definitely mentioned in the Qur'an, which began to be revealed in 610, is more evidence that it is a divine book.

CREATION IN SIX DAYS

Your Lord is Allah, Who created the heavens and the Earth *in six days* and then settled Himself firmly on the Throne... (Qur'an, 7:54)

One example of the harmony between the Qur'an and modern science is the subject of the age of the universe. Cosmologists estimate the age of the universe as 16-17 billion years. The Qur'an states that the entire universe was created in six days. These two time frames, which may seem contradictory, are actually surprisingly compatible. In fact, both these figures concerning the age of the universe are correct. In other words, the universe was created in six days, as revealed in the Qur'an, and this period corresponds to 16-17 billion years in the way that we experience time.

In 1915 Einstein proposed that time was relative, that the passage of time altered according to space, the speed of the person travelling and the force of gravity at that moment. Bearing in mind these differences in the passage of time, the period of time in which the universe was created as revealed in seven different verses of the Qur'an is actually highly compatible with scientists' estimations. The six-day period revealed in the Qur'an can be thought of as six periods. Because, taking into account the relativity of time, a "day" refers only to a 24-hour period experienced on Earth under current conditions. Elsewhere in the universe, however, at another time and under other conditions, a "day" could refer to a much longer period of time. Indeed, the word "*ayyaam*" in the period of six days (*sittat ayyaam*) in these verses (Qur'an 32:4, 10:3, 11:7, 25:59, 57:4, 50:38, and 7:54) means not only "days," but also "age, period, moment, term."

In the first period of the universe, the passage of time took place much faster than that with which we are familiar today. The reason for this is that, at the moment of the Big Bang, our universe was compressed into a very small point. The expansion of the universe and

increase in its volume ever since the moment of that explosion has extended the borders of the universe to millions of light years. Indeed, the stretching of space ever since that moment has had very important ramifications for universal time.

The energy at the moment of the Big Bang slowed down the flow of time 10^{12} (one million million) times. When the universe was created the speed of universal time was higher up to a million million times, as time is experienced today. In other words, **a million million minutes on Earth is the equivalent of just one minute in universal time.**

When a six-day period of time is calculated according to the relativity of time, it equates to six million million (six trillion) days. That is because universal time flows a million million times faster than time on Earth. Calculated in terms of years, 6 trillion days equates to approximately 16.427 billion years. This is within the estimated range for the age of the universe.

6,000,000,000,000 days/365.25 = 16.427104723 billion years

On the other hand, each of the six days of creation equates to very different periods, as we perceive time. The reason for this is that the speed of the passage of time declines in proportion to the expansion of the universe. Ever since the Big Bang, as the size of the universe doubled, so the passage of time halved. As the universe grew, the speed at which the universe doubled increasingly slowed down. This rate of expansion is a scientific fact acknowledged the world over and described in the text book *The Fundamentals of Physical Cosmology*. When we calculate every day of creation in terms of Earth time, the following situation emerges:

◆ Looked at from the moment when time began, the first day of creation (first phase) lasted 24 hours. This period, however, is the equivalent of 8 billion years in Earth terms.

◆ The second day of creation (second phase) lasted 24 hours. This, however, lasted half as long, in our terms, as the preceding day, in other words 4 billion years.

◆ The third day (third phase) lasted half as long as the second day, in other words 2 billion years.

◆ The fourth day (fourth phase) lasted 1 billion years.

◆ The fifth day (fifth phase) lasted 500 million years.

◆ And the sixth day (sixth phase) lasted 250 million years.

◆ Conclusion: **When the six days of creation, in other words the six phases, are added together in Earth terms, the resulting figure is 15 billion 750 million years. This figure displays an enormous parallel with modern-day estimations.**

This conclusion is one of the facts revealed by 21st century science. Science has once again confirmed a fact revealed in the Qur'an 1,400 years ago. This harmony between the Qur'an and science is one of the miraculous proofs that the Qur'an is the revelation of Allah, the Creator, the Omniscient.

THE TRUTH OF DESTINY

***But you will not will unless Allah wills.* Allah is All-Knowing, All-Wise. (Qur'an, 76:30)**

As a result of experiments he performed in 1973, Professor Benjamin Libet, a neurophysiologist at the University of California, revealed that all our decisions and choices are set out beforehand, and that consciousness only comes into play half a second after everything has been determined.[45] This is interpreted by other neurophysiologists as meaning that we actually live in the past and that our consciousness is like a monitor which shows us everything half a second later.

Therefore, none of the experiences we perceive are in real time, but are delayed by up to half a second from the real events themselves. Libet carried out his research by making use of the fact that brain surgery can be performed without the use of narcosis, in other words while the subject is fully conscious. Libet stimulated the brains of his subjects with small electrical currents, and when they experienced a perception that their hands had been touched the subjects said that they had felt that "touch" almost half a second before. As a result of his measurements, Libet arrived at the following conclusion:

All perceptions are normally transmitted to the brain. As these are subconsciously evaluated and interpreted, the ego is unaware of anything. The information that appears before our minds, in other

words that we can be aware of, is transmitted to the cortex, the seat of consciousness, after a certain delay.[46]

The conclusion from this may be summarised as follows: **The decision to move a muscle takes place before that decision reaches the consciousness.** There is always a delay between a neurological or perceptual process and our becoming aware of the thought, feeling, perception or movement it represents. To put it another way, we can only be aware of a decision after that decision has been taken.

In Professor Libet's experiments, this delay varies between 350 and 500 milliseconds, although the conclusion that emerges is in no way dependent upon those figures. Because, according to Libet, whatever the length of that delay-it makes no difference whether it is great or small, whether it lasts an hour or a microsecond-our physical life is always in the past. This demonstrates that every thought, emotion, perception or movement happens before reaching our consciousness, and that proves that the future is entirely outside our control.[47]

In other experiments, Professor Libet left the choice of when the subjects would move their fingers up to them. The brains of the subjects were monitored at the moment their fingers moved, and it was observed that the relevant brain cells went into action before the subjects actually took the decision. To put it another way, the command "do!" reaches the individual, and the brain is readied to perform the action; the individual only becomes aware of this half a second later. He or she does not take a decision to act and then performs that action, but rather performs an action predetermined for him or her. Yet, the brain makes an adjustment, removing any recognition that the individual is actually living in the past. For that reason, at the moment we refer to as "now," we are actually living something determined in the past. As already discussed, these studies manifest the fact that everything happens by the will of Allah, as revealed in Surat al-Insan 30. (See Harun Yahya, *Timelessness and the Reality of Fate*, Goodword Books, New Delhi, 2001)

DUALITY IN CREATION

Glory be to Him Who created all the pairs: from what the earth produces and from themselves and from things unknown to them. (Qur'an, 36:36)

While "male and female" is equivalent to the concept of "pair," "**things unknown to them**," as expressed in the Qur'an, bears a broader meaning. Indeed, we encounter one of the meanings pointed to in the verse in the present day. The British physicist Paul Dirac, who discovered that matter was created in pairs, won the Nobel Prize for Physics in 1933. This finding, known as "parity," revealed the duality known as matter and anti-matter. Anti-matter bears the opposite characteristics to matter. For instance, contrary to matter, anti-matter electrons are positive and protons negative. This fact is expressed in a scientific source as follows:

> ... every particle has its antiparticle of opposite charge… [T]he uncertainty relation tells us that pair creation and pair annihilation happen in the vacuum at all times, in all places.[48]

Another example of duality in creation is plants. Botanists only discovered that there is a gender distinction in plants some 100 years ago.[49] Yet, the fact that plants are created in pairs was revealed in the following verses of the Qur'an 1,400 years ago:

> **It is Allah Who created the heavens with no support-you can see them-and cast firmly embedded mountains on the earth so that it would not move under you, and scattered about in it creatures of every kind. And We send down water from the sky and *make every generous plant grow in it, in pairs*. (Qur'an, 31:10)**
>
> **It is He Who made the earth a cradle for you and threaded pathways for you through it and sent down water from the sky by which *We have brought forth diverse pairs of plants*. (Qur'an, 20:53)**



There are antimatter equivalents of all the basic particles in the universe. Antimatters possess the same mass but carry opposite charges. For that reason, when matter and antimatter make contact they disappear by turning into energy.

In the same way, fruits, are of two types: male or female. As the Qur'an proclaims:

> **He stretched out Earth and placed firmly embedded mountains and rivers in it, and made two types [male and female] of every kind of fruit. He covers over day with night. There are signs in that for people who reflect. (Qur'an, 13:3)**

The word "*zawjayni*," translated as "two types," comes from "*zawj*," meaning "one of a pair." As we know, fruits are the final product produced by ripening plants. The stage before fruit is the flower. Flowers also have male and female organs. When pollen is carried to the flower and fertilization takes place, they begin to bear fruit. The fruit gradually ripens and starts to release seeds. The fact that fruits have gender-specific features is another piece of scientific information indicated in the Qur'an.

SUB-ATOMIC PARTICLES

Following the development of the atomic theory of the Greek philosopher Democritus, people used to believe that matter consisted of minute, indivisible and indestructible particles known as atoms. However, advances in the study of atoms have refuted this notion. At the present time, modern science has revealed that the atom, previously regarded as the smallest particle, can actually be split. This fact only emerged in the last century, but was revealed in the Qur'an 1,400 years ago:

... He is the Knower of the Unseen, ***Whom not an atom's weight eludes, either in the heavens or in the earth; nor is there anything smaller or larger than that*** **which is not in a Clear Book. (Qur'an, 34:3)**

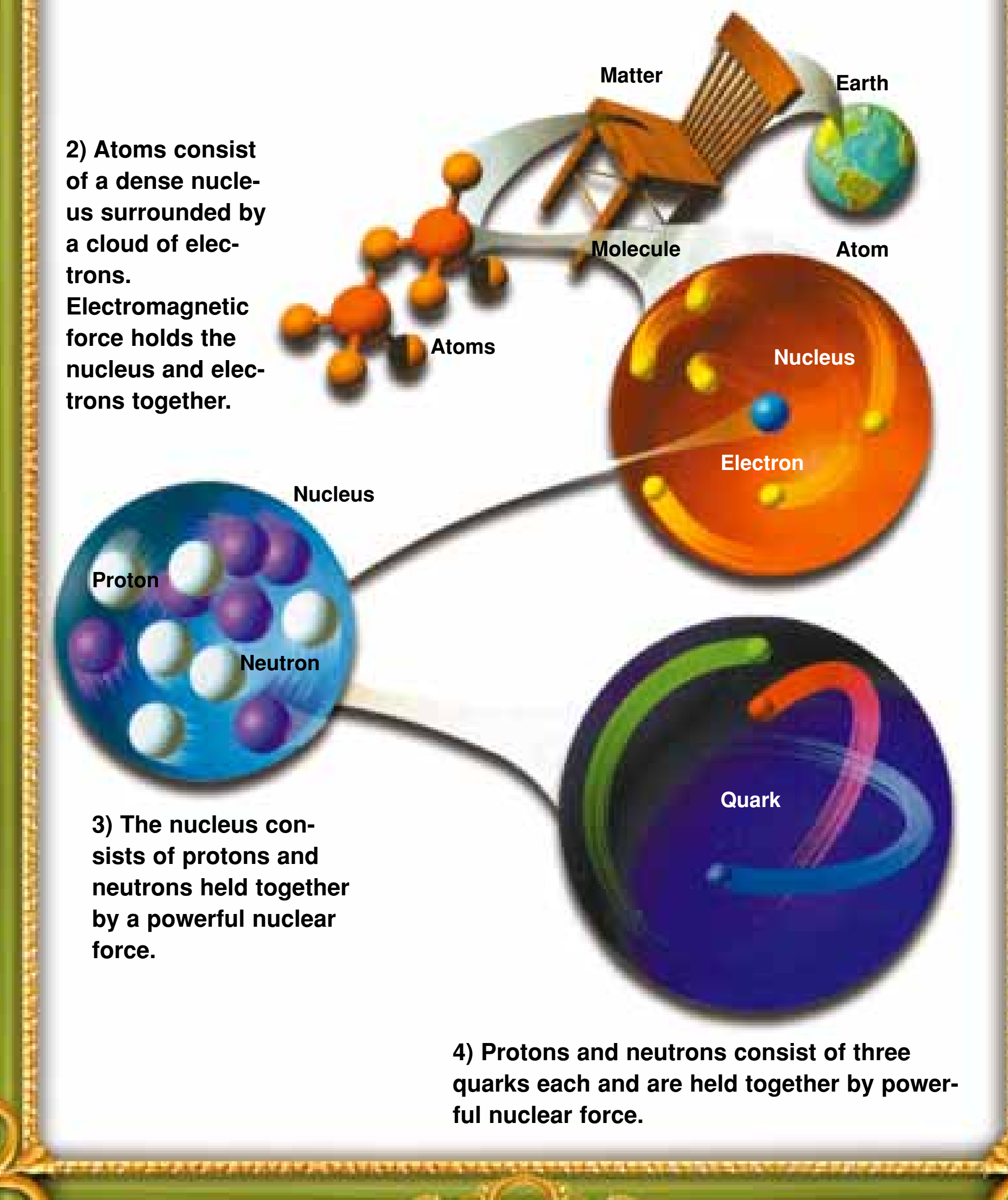
... Not even an atom's weight eludes your Lord, either on earth or in heaven. Nor is there anything smaller than that**, or larger, which is not in a Clear Book. (Qur'an, 10:61)**

This verse refers to "atom" and smaller particles still.

Up until 20 years ago, it was believed that the smallest particles were the protons and neutrons which comprise the atom. Very recently, however, even smaller particles of which these themselves consist were discovered. A specialised branch of physics, called "particle physics," emerged to study these "sub-particles" and their particular behaviour. Particle physics research has revealed that the protons and neutrons which comprise the atoms actually consist of sub-particles known as quarks. The size of these quarks, the basic components of protons, whose small size is beyond human conception, is astonishing: 10^{-18} (0.000000000000000001 of a metre).[50]

Another point worthy of note is that these verses draw particular attention to the weight of the atom. The word *"mithqaal,"* in the expression "*mithqaalu tharratin*" (an atom's weight) in the above verses, means weight. In fact, it has been discovered that the protons, neutrons and electrons which form the atom are also compounds which give the

atom its weight. Therefore, it is yet another scientific miracle of the Qur'an that attention is drawn instead to the weight of the atom and not its size or any other feature. (See Harun Yahya, *The Miracle in the Atom*, Ta-Ha Publishers, UK, 2004)



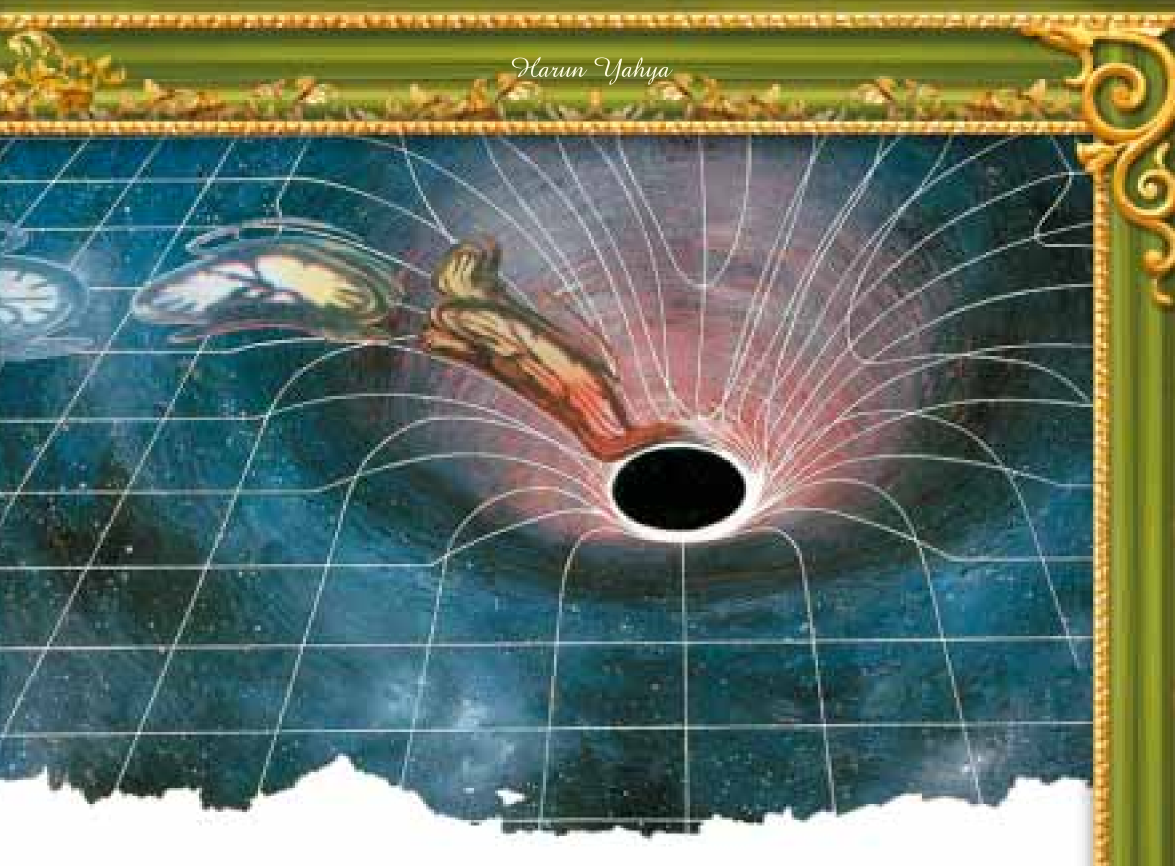


BLACK HOLES

The 20th century saw a great many new discoveries regarding celestial phenomena in the universe. One of these entities, which has only recently been encountered, is the Black Hole. These are formed when a star which has consumed all its fuel collapses in on itself, eventually turning into a black hole with infinite density and zero volume and an immensely powerful magnetic field. We are unable to see black holes even with the most powerful telescope, because their gravitational pull is so strong that light is unable to escape from them. However, such a collapsed star can be perceived by means of the effect it has on the surrounding area. In Surat al-Waqi'a, Allah draws attention to this matter in this way, by swearing upon the position of stars:

And I swear by *the stars' positions*-and that is a mighty oath if you only knew. (Qur'an, 56:75-76)

The term "black hole" was first employed in 1969 by the American physicist John Wheeler. Previously, we imagined that we were able to see all the stars. However, it later emerged that there were stars in space whose light we were unable to perceive. Because, the light of these collapsed stars disappears. Light cannot escape from a black hole because it is such a high concentration of mass in a small space. The enormous gravitation captures even the fastest particles, i.e. the photons. For example, the final stage of a typical star, three times the mass of the Sun, ends after its burning out and its implosion as a black hole of only



20 kilometres (12.5 miles) in diameter! Black holes are "black," i.e. veiled from direct observation. They nevertheless reveal themselves indirectly, by the tremendous suction which their gravitational force exerts on other heavenly bodies. As well as depictions of the Day of Judgement, the verse below may also be pointing to this scientific discovery about black holes:

When the stars are extinguished. (Qur'an, 77:8)

Moreover, stars of great mass also cause warps to be perceived in space. Black holes, however, do not just cause warps in space but also tear holes in it. That is why these collapsed stars are known as black holes. This fact may be referred to in the verse about stars, and this is another important item of information demonstrating that the Qur'an is the word of Allah:

[I swear] by Heaven and the Tariq! And what will convey to you what the *Tariq* is? *The Star Piercing [the darkness]*! (Qur'an, 86:1-3)

PULSARS: PULSATING STARS

***[I swear] by Heaven and the Tariq*! And what will convey to you what the *Tariq* is? The Star Piercing [the darkness]! (Qur'an, 86:1-3)**

The word "*Tariq*," name of the Sura 86, comes from the root "*tarq*," whose basic meaning is that of striking hard enough to produce a sound, or hitting. Bearing in mind the word's possible meaning as "beating," "striking hard," our attention may be being drawn in this sura to an important scientific fact. Before analysing this information, let us look at the other words employed in the verse to describe these stars. The term "*al-taariqi*" in the above verse means a star that pierces the night, that pierces the darkness, born at night, piercing and moving on, beating, striking, or sharp star. Furthermore, the term "*wa*" draws attention to the things being sworn on-the heaven and the *Tariq*.

Through research carried out by Jocelyn Bell Burnell, at Cambridge University in 1967, a regular radio signal was identified. Until that time, however, it was not known that that there was a heavenly body that could be the source of regular pulse or beating rather like that of the heart. In 1967, however, astronomers stated that, as matter grows denser in the core as it revolves around its own axis, the star's magnetic field also grows stronger, and thus gives rise to a magnetic field at its poles 1 trillion times stronger than that of Earth. They realised that a body revolving so fast and with such a powerful magnetic field emits rays consisting of very powerful radio waves in a conic form at every revolution. Shortly afterwards, it was also realised that the source of these signals is the rapid revolution of neutron stars. These newly discovered neutron stars are known as "pulsars." These stars, which turn into pulsars through supernova explosions, are of the greatest mass, and are the brightest and fastest moving bodies in the universe. Some pulsars revolve 600 times a second.[51]

The word "pulsar" comes from the verb to pulse. According to the

American Heritage Dictionary, the word means to pulsate, to beat. *Encarta Dictionary* defines it as to beat rhythmically, to move or throb with a strong regular rhythm. Again, according to the *Encarta Dictionary,* the word "pulsate," which comes from the same root, means to expand and contract with a strong regular beat.

Following that discovery, it was realised that the phenomenon described in the Qur'an as "*tariq*," beating, bore a great similarity to the neutron stars known as pulsars.

Neutron stars form as the nuclei of super giant stars collapse. The highly compressed and dense matter, in the form of a rapidly revolving sphere, entraps and squeezes most of the star's weight and magnetic field. The powerful magnetic field created by these rapidly revolving neutron stars has been shown to cause the emission of powerful radio waves observable on Earth.

In the third verse of Surat at-Tariq the term "*al-najmu al-thaaqibu,*" meaning piercing, moving on, or opening holes, indicates that Tariq is a bright star that pierces a hole in the darkness and moves on. The concept of the term "*adraaka*" in the expression "**And what will convey to you what the *Tariq* is?**" refers to comprehension. Pulsars, formed through the compression of stars several times the size of the Sun, are among those celestial bodies that are hard to comprehend. The question in the verse emphasizes how hard it is to comprehend this beating star. (Allah knows best.)

As discussed, the stars described as *Tariq* in the Qur'an bear a close similarity to the pulsars described in the 20th century, and may reveal to us another scientific miracle of the Qur'an.

Pulsars are the remains of extinguished stars which emit very powerful, pulse-like radio waves and which revolve very rapidly around their own axes. It has been calculated that there are more than 500 pulsars in the Milky Way, of which our Earth is a part.

THE STAR SIRIUS

When certain concepts mentioned in the Qur'an are studied in the light of 21st century scientific discoveries we find ourselves imparted with yet more miracles of the Qur'an. One of these is the star Sirius, mentioned in Surat an-Najm 49:

… it is He Who is the Lord of Sirius. (Qur'an, 53: 49)

The fact that the Arabic word "*shi'raa*," the equivalent of the star Sirius, appears only in Surat an-Najm, meaning only "star," 49 is particularly striking. Because, considering the irregularity in the movement of Sirius, the brightest star in the night sky, as their starting point, scientists discovered that it was actually a double star. Sirius is actually a set of two stars, known as Sirius A and Sirius B. The larger of these is Sirius A, which is also the closer to the Earth and the brightest star that can be seen with the naked eye. Sirius B, however, cannot be seen without a telescope.

The Sirius double stars orbit in ellipses about one another. The orbital period of Sirius A & B about their common centre of gravity is 49.9 years. This scientific data is today accepted with one accord by the departments of astronomy at Harvard, Ottawa and Leicester Universities.[52] This information is reported as follows in various sources:

> Sirius, the brightest star, is actually a twin star… Its orbit lasts 49.9 years.[53]
>
> As is known, the stars Sirius-A and Sirius-B orbit each other in a double bow every 49.9 years.[54]

The point requiring attention here is the double, bow-shaped orbit of the two stars around one another.

However, this scientific fact, the accuracy of which was only realised in the late 20th century, was miraculously indicated in the

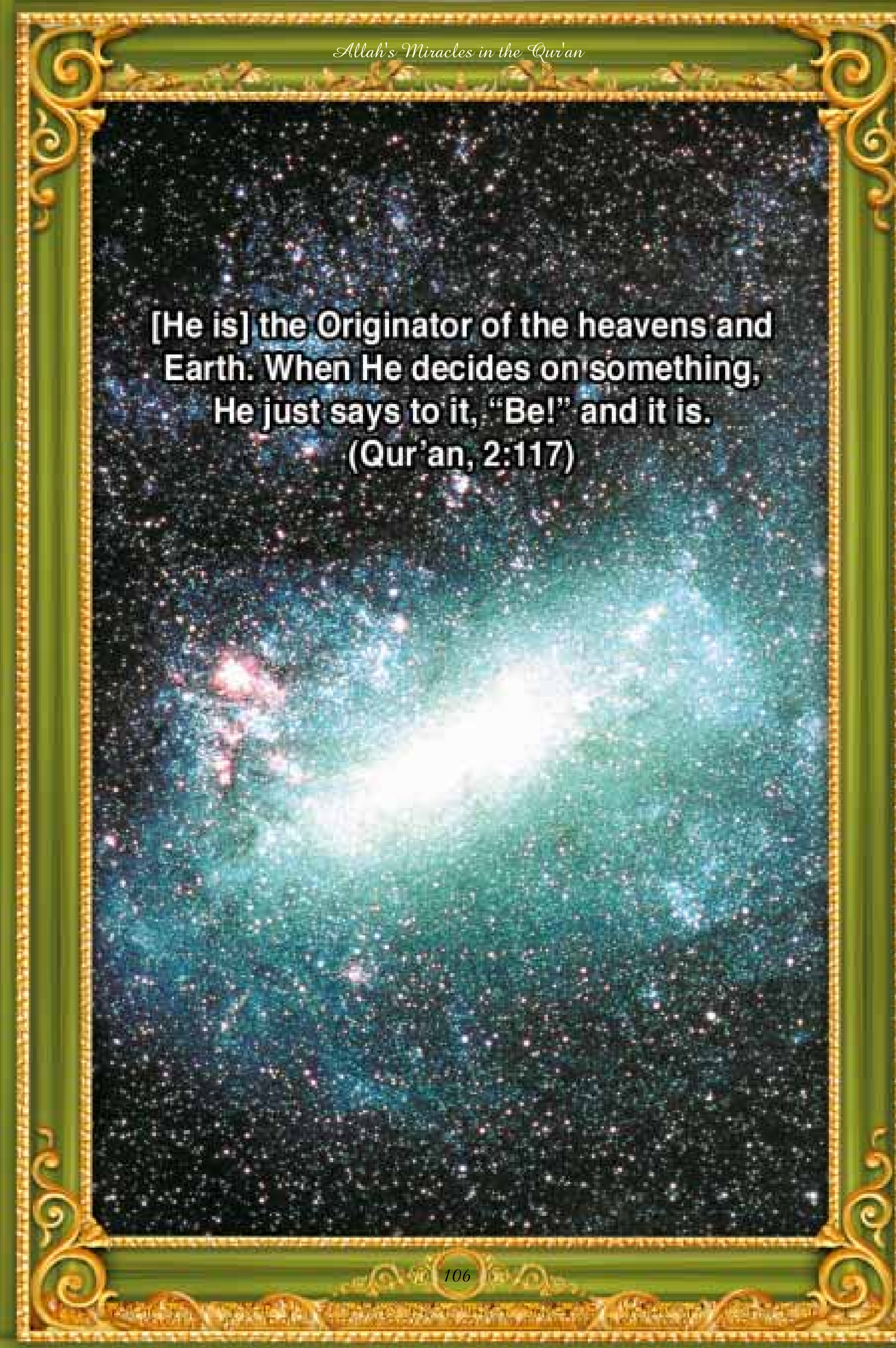
Qur'an 1,400 years ago. When verses 49 and 9 of Surat an-Najm are read together, this miracle becomes apparent:

It is He Who is the Lord of Sirius. (Qur'an, 53: 49)

He was two bow-lengths away or even closer. (Qur'an, 53:9)

The description in Surat an-Najm 9 may also describe how these two stars approach one another in their orbits. (Allah knows best.) This scientific fact, that nobody could have known at the time of the revelation of the Qur'an, once again proves that the Qur'an is the word of Almighty Allah.

The star Sirius appears in Surat an-Najm (meaning "star"). The double stars that comprise Sirius approach each other with their axes in a bow-shape once every 49.9 years. This astronomical phenomenon is indicated in the verses Surat an-Najm 9 and 49.


[He is] the Originator of the heavens and Earth. When He decides on something, He just says to it, "Be!" and it is.
(Qur'an, 2:117)

LIGHT AND DARK

Praise belongs to Allah Who created the heavens and the Earth and appointed *darkness and light*... (Qur'an, 6:1)

We all know that without light a person cannot see his surroundings with the naked eye. However, the light that we can see is only a very small part of all light-emitting energy. There are other kinds of light-emitting energy that human beings cannot perceive, such as infrared, ultra-violet, x-rays and radio waves. Human beings are effectively blind to such light waves.

It is interesting, therefore, that the word for "darkness" in the Qur'an is always in the plural. The Arabic word, "*thulumaat*," is used in the plural in 23 verses of the Qur'an, and never used in the singular. The use of the word "darkness" in the Qur'an indicates that in addition to those light waves we can see, there may also be other kinds.

Only recently did scientists discover why the plural may have been used here. Wave lengths vary in a form of energy known as electromagnetic radiation. All the different forms of electromagnetic radiation behave as energy waves in space. This can be compared to the waves which form when a stone is thrown into a pond. As the waves on a pond can be of different sizes, so electromagnetic radiation has different-sized waves.

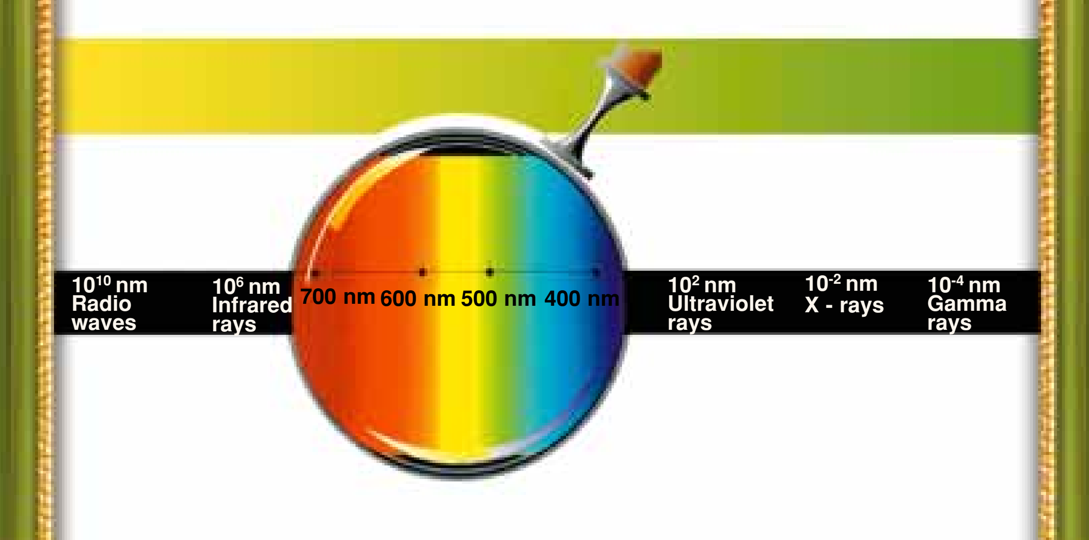
Stars and other sources of light do not all give off the same kind of emissions. These different rays are classified according to their wavelengths. The spectrum of wavelengths is quite wide. There is a 10^{25} difference between gamma rays, with the smallest size wavelength, and radio waves, which are the largest. Nearly all the rays emitted by the Sun are squeezed into just one part of this 10^{25} spectrum.

In order to better understand the colossal dimensions of this figure, it will be useful to make a comparison. If we wanted to count to

10^{25}, and if we counted day and night without pause, it would take us 100 million times the age of the Earth to finish. The different wavelengths in the universe are distributed within a spectrum of just such a size. 70% of the different wavelengths emitted by the Sun are limited to a very narrow spectrum between 0.3 microns and 1.5 microns. There are three kinds of light within that band: visible light, infra-red light and ultraviolet light. Despite occupying a band less than 1 in 10^{25}, the rays known as visible light represent 41% of all the Sun's rays.

As has been discussed, electromagnetic waves perceivable to the human eye are responsible for only a very small part of the light spectrum. The other regions represent only darkness for human beings, who are blind to wavelengths outside that band.[55]

As can be seen in the diagram the wavelength range of light visible to human beings is very narrow. Other wavelengths spell darkness to man.



COMBUSTION WITHOUT FIRE

Allah is the light of the heavens and the Earth. The metaphor of His Light is that of *a niche in which is a lamp, the lamp inside a glass, the glass like a brilliant star*, lit from a blessed tree, an olive, *neither of the east nor of the west,* its oil all but *giving off light even if no fire touches it.* Light upon light. Allah guides to His Light whoever He wills and Allah makes metaphors for mankind and Allah has knowledge of all things. (Qur'an, 24:35)

This verse refers to something that emits light. This light-emitting entity is compared to a star. The fact that the fuel used by this star-like, light-emitting body belongs to neither East nor West may be an indication that the body has no physical dimensions. If one assumes that the fuel source is in an energy dimension, then it is very likely that the fuel in the verse refers to electrical energy, and the light-emitting body to a light bulb.

A bulb is a body which shines like a star and emits light, inside glass, and that is in full conformity with the description in the verse. Unlike oil lamps and gas lamps, light bulbs do not burn oil, and, in line with the description supplied in the verse, combustion without fire takes place inside it. As a result of the vibration among the atoms of the heat-resistant tungsten wire, the temperature inside the bulb rises to over 2,000 degrees Celsius (3,630°F). This temperature, which would melt other metals, is so high that it gives rise to a powerful, visible light. Despite that heat, however, no combustion takes place, again in line with the verse, since the bulb contains no oxygen. In addition, the filament inside the bulb closely resembles a bright star.

If we bear in mind the fact that electricity is one of the greatest discoveries in the history of the world, and that it lights just about the entire world by means of bulbs, then we may well assume that the verse may be pointing to this major discovery. (Allah knows best.)

Another explanation could be that the light is emitted as a result of the nuclear reaction in stars. Stars are bright, hot, rotating masses of gas which emit large quantities of light and heat as a result of nuclear reactions. Most newly-forming large stars begin to collapse under the weight of their own gravitational pull. That means that their centres are hotter and denser. When the matter in the centre of the star is sufficiently heated-when it reaches at least 10 million degrees Celsius (18 million degrees Fahrenheit)-nuclear reactions begin.[56] What happens inside a star is that with enormous energy (fusion), hydrogen turns into helium. Nuclear fusion takes the particles that make up hydrogen and sticks them together to make helium (1 helium atom is made from 4 hydrogen atoms). In order to make the protons and neutrons in the helium stick together, the atom gives off tremendous energy. The energy released in the process is radiated from the surface of the star as light and heat. When the hydrogen is consumed, the star then begins to burn with helium, in exactly the same way, and heavier elements are formed. These reactions continue until the mass of the star has been consumed.

However, since oxygen is not used in these reactions inside stars, the result is not ordinary combustion, such as that takes place when burning a piece of wood. The combustion seen as giant flames in stars does not actually derive from fire. Indeed, burning of just this kind is described in the verse. If one also thinks that the verse refers to a star, its fuel and combustion without fire, then one can also think that it is referring to the emission of light and mode of combustion in stars. (Allah knows best.)

THE WEIGHT OF CLOUDS

The weight of clouds can reach quite astonishing proportions. For example, a cumulonimbus cloud, commonly known as the thunder cloud, can contain up to 300,000 tons of water.

The fact that a mass of 300,000 tons of water can remain aloft is truly amazing. Attention is drawn to the weight of clouds in other verses of the Qur'an:

It is He Who sends out the winds, bringing advance news of His mercy, so that *when they have lifted up the heavy clouds*, We dispatch them to a dead land and send down water to it, by means of which We bring forth all kinds of fruit... (Qur'an, 7:57)

It is He Who shows you the lightning, striking fear and bringing hope; it is He Who heaps up *the heavy clouds*. (Qur'an, 13:12)

At the time when the Qur'an was revealed, of course, it was quite impossible to have any information about the weight of clouds. This information, revealed in the Qur'an, but discovered only recently, is yet another proof that the Qur'an is the word of Allah.

RAIN IN MEASURED AMOUNTS

Another item of information provided in the Qur'an about rain is that it is sent down to Earth in "due measure." This is mentioned in Surat az-Zukhruf as follows:

It is He Who sends down *water in measured amounts from the sky* by which We bring a dead land back to life. That is how you too will be raised [from the dead]. (Qur'an, 43:11)

This measured quantity in rain has again been discovered by modern research. It is estimated that in one second, approximately 16 million tons of water evaporates from the Earth. This figure amounts to 513 trillion tons of water in one year. This number is equal to the amount of rain that falls on the Earth in a year. Therefore, water continuously circulates in a balanced cycle, according to a "measure." Life on Earth depends on this water cycle. Even if all the available technology in the world were to be employed for this purpose, this cycle could not be reproduced artificially.

Even a minor deviation in this equilibrium would soon give rise to a major ecological imbalance that would bring about the end of life on Earth. Yet, it never happens, and rain continues to fall every year in exactly the same measure, just as revealed in the Qur'an.

The proportion of rain does not merely apply to its quantity, but also to the speed of the falling raindrops. The speed of raindrops, regardless of their size, does not exceed a certain limit.

Philipp Lenard, a German physicist who received the Nobel Prize in physics in 1905, found that the fall speed increased with drop diameter until a size of 4.5 mm (0.18 inch). For larger drops, however, the fall speed did not increase beyond 8 metres per second (26 ft/sec).[57] He attributed this to the changes in drop shape caused by the air flow as the drop size increased. The change in shape thus increased the air

resistance of the drop and slowed its fall rate.

As can be seen, the Qur'an may also be drawing our attention to the subtle adjustment in rain which could not have been known 1,400 years ago.

Every year, the amount of water that evaporates and that falls back to the Earth in the form of rain is "constant": 513 trillion tons. This constant amount is declared in the Qur'an by the expression "sending down water in due measure from the sky." The constancy of this quantity is very important for the continuity of the ecological balance, and therefore, life.



HOW RAIN FORMS

How rain was formed remained a great mystery for quite some time. Only after the weather radar was invented was it possible to discover the stages by which rain is formed.

According to this discovery, the formation of rain takes place in three stages. First, the "raw material" of rain rises up into the air with the wind. Later, clouds are formed, and finally raindrops appear.

The Qur'an's account of the formation of rain refers exactly to this process. In one verse, this formation is described in this way:

> **It is Allah Who sends *the winds which stir up clouds which He spreads about the sky however He wills. He forms them into dark clumps and you see the rain come pouring out from the middle of them.* When He makes it fall on those of His servants He wills, they rejoice. (Qur'an, 30:48)**

Now, let us examine these three stages outlined in the verse in more detail.

FIRST STAGE: "**It is Allah Who sends the winds...**"

Countless air bubbles formed by the foaming of the oceans continuously burst and cause water particles to be ejected towards the sky. These particles, which are rich in salt, are then carried away by winds and rise upward in the atmosphere. These particles, which are called aerosols, function as water traps, and form cloud drops by collecting around the water vapour themselves, which rises from the seas as tiny droplets.

SECOND STAGE: "**.... which stir up clouds which He spreads about the sky however He wills. He forms them into dark clumps...**"

The clouds are formed from water vapour that condenses around the salt crystals or dust particles in the air. Because the water droplets in these clouds are very small (with a diameter between 0.01 and 0.02 mm [0,0004 and 0,0008 inch]), the clouds are suspended in the air, and spread across the sky. Thus, the sky is covered in clouds.

THIRD STAGE: "...and you see the rain come pouring out from the middle of them"

The water particles that surround salt crystals and dust particles thicken and form raindrops, so, drops that become heavier than the air leave the clouds and start to fall to the ground as rain.

As already discussed, every stage in the formation of rain is related in the verses of the Qur'an. Furthermore, these stages are explained in exactly the right sequence. Just as with many other natural phenomena on the Earth, Allah gave the most correct explanation of this phenomenon, and made it known in the Qur'an centuries before it was discovered.

In another verse, the following information is given about the formation of rain:



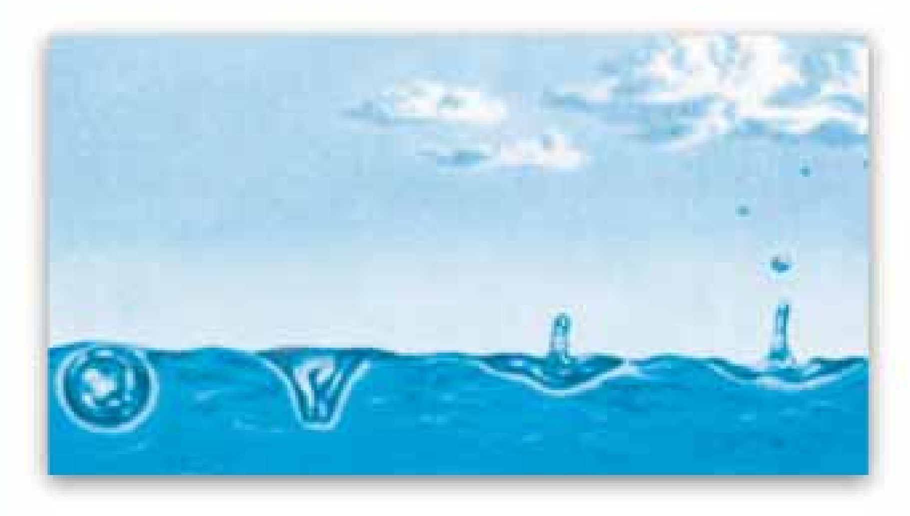
Haven't you seen how Allah drives along the clouds, then joins them together, then makes them into a stack, and then you see the rain come out of it? And He sends down from the sky mountain masses [of clouds] with cold hail in them, striking with it anyone He wills and averting it from anyone He wills. The brightness of His lightning almost blinds the sight. (Qur'an, 24:43)

Scientists studying cloud types came across surprising results with regards to the formation of rain clouds. Rain clouds are formed and shaped according to definite systems and stages. The stages of formation of one kind of rain cloud, cumulonimbus, are these:

1. STAGE, Being driven along: Clouds are carried along, that is, they are driven along, by the wind.

2. STAGE, Joining: Then, small clouds (cumulonimbus clouds) driven along by the wind join together, forming a larger cloud.[58]

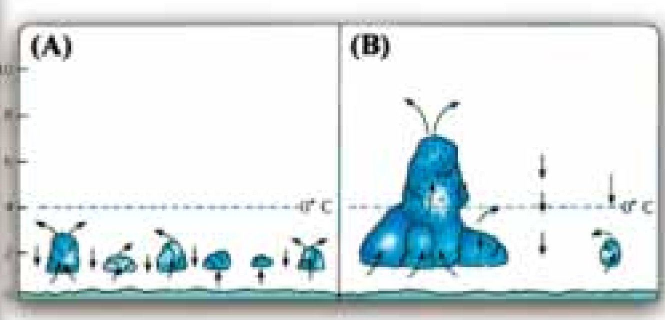
3. STAGE, Stacking: When the small clouds join together, updrafts within the larger cloud increase. The updrafts near the centre of the cloud are stronger than those near the edges. These updrafts cause the



The above illustration shows the water droplets being released into the air. This is the first stage in the formation of rain. After that, the water droplets in the newly formed clouds will be suspended in the air and then condense to form rain. All of these stages are related in the Qur'an.

cloud body to grow vertically, so the cloud is stacked up. This vertical growth causes the cloud body to stretch into cooler regions of the atmosphere, where drops of water and hail formulate and begin to grow larger and larger. When these drops of water and hail become too heavy for the updrafts to support them, they begin to fall from the cloud as rain, hail, etc.[59]

We must remember that meteorologists have only recently come to know these details about cloud formation, structure and function, by using advanced equipment like planes, satellites, computers etc. It is evident that Allah has provided us information that could not have been known 1,400 years ago.



(A) Isolated small pieces of clouds (cumulonimbus clouds)
(B) When the small clouds join together, updrafts within the larger cloud increase. As a result, the cloud is stacked up.



These updrafts cause the cloud body to grow vertically and the cloud is stacked up. This vertical growth causes the cloud body to stretch into cooler regions of the atmosphere, where drops of water and hail formulate and begin to grow larger and larger. When these drops of water and hail become too heavy for the updrafts to support them, they begin to fall from the cloud as rain, hail, etc. This scientific fact was announced in Surat an-Nur 43 fourteen centuries ago by Allah in this way: "... then [He] makes them into a stack, and then you see the rain come out of it..."

THE QUIVERING AND SWELLING OF THE EARTH

And you see the earth dead and barren. Then, when We send down water onto it, it quivers and swells and sprouts with luxuriant plants of every kind. (Qur'an, 22:5)

The Arabic word for "quivers" is "*ihtazzat*," meaning "to set in motion, come alive, quiver, move, stir; the movement and stretching of a plant." The word "*rabat*," translated as "swells," bears the meanings "to increase, grow in number, swell, grow, develop, rise (of a plant), provision, fill with air." These words describe in the most appropriate manner the changes that occur in the molecular structure of soil during rain.

The motion described in the verse is different from the movement of Earth's crust, such as when a portion of it moves to produce an earthquake, for it is only the soil particles that are moving. These particles are composed of layers, each of which is on top of the other. When water penetrates the layers, it causes the swelling of mud particles. The stages referred to in the verse can be scientifically explained as follows:

1. Quivering of the soil: The electrostatic charge on the particle surface that appears after the water falls on the soil in sufficient amount would cause its instability and quivering movements. This movement is stabilized only after this charge has been neutralized with an opposing one. The soil particle's moving and quivering is also due to its collision with water particles. Since the water particles move in no specific direction, the soil particles move as they are struck from all sides. Robert Brown, a Scottish botanist, discovered in 1827 that when raindrops fall on

the soil, they cause a kind of shaking and vibration in the soil molecules. He described this movement of microscopic particles, which today is known as the "Brownian motion."[60]

2. Swelling of the soil: When it rains, those raindrops hitting the soil cause its particles to swell and increase in volume. This is because when there is abundant water, the space between soil particles, which allows water particles and dissolved ions to enter, increases. When water and the nourishing elements dissolved in it diffuse between the layers, the size of the soil particles increases. Consequently, these particles serve as water deposits that bring the soil to life. It is due to Allah's infinite grace upon humanity that this water is stored in this manner without seeping downward due to the action of gravity. If the soil could not hold water and these mineral deposits could not be laid down in the soil, the water would soak into Earth's deepest parts and, because of its resulting absence, all plants would soon die. However, our Lord has created the soil in such a way that various products can emerge from it.

3. Sprouting of the earth: When there is enough water in the soil, the seeds become active and absorb simple nutritious material. Growing plants meet their water requirements for 2 to 3 months from these deposits.

The above verse describes, in three stages, what happens when rain falls onto dry ground: the soil particles quiver, and the soil swells and then brings forth various products. These stages, which the Qur'an revealed 1,400 years ago, are strikingly parallel to the scientific descriptions. Another verse reveals this about plants:

A sign for them is the dead land that We bring to life and from which We bring forth grain, of which they eat. (Qur'an, 36:33)

RAINS WHICH BRING A DEAD LAND BACK TO LIFE

The rain's function of "bringing a dead land back to life" is indicated in several verses of the Qur'an:

... We send down from heaven pure water so that by it We can bring a dead land to life and give drink to many of the animals and people We created. (Qur'an, 25:48-49)

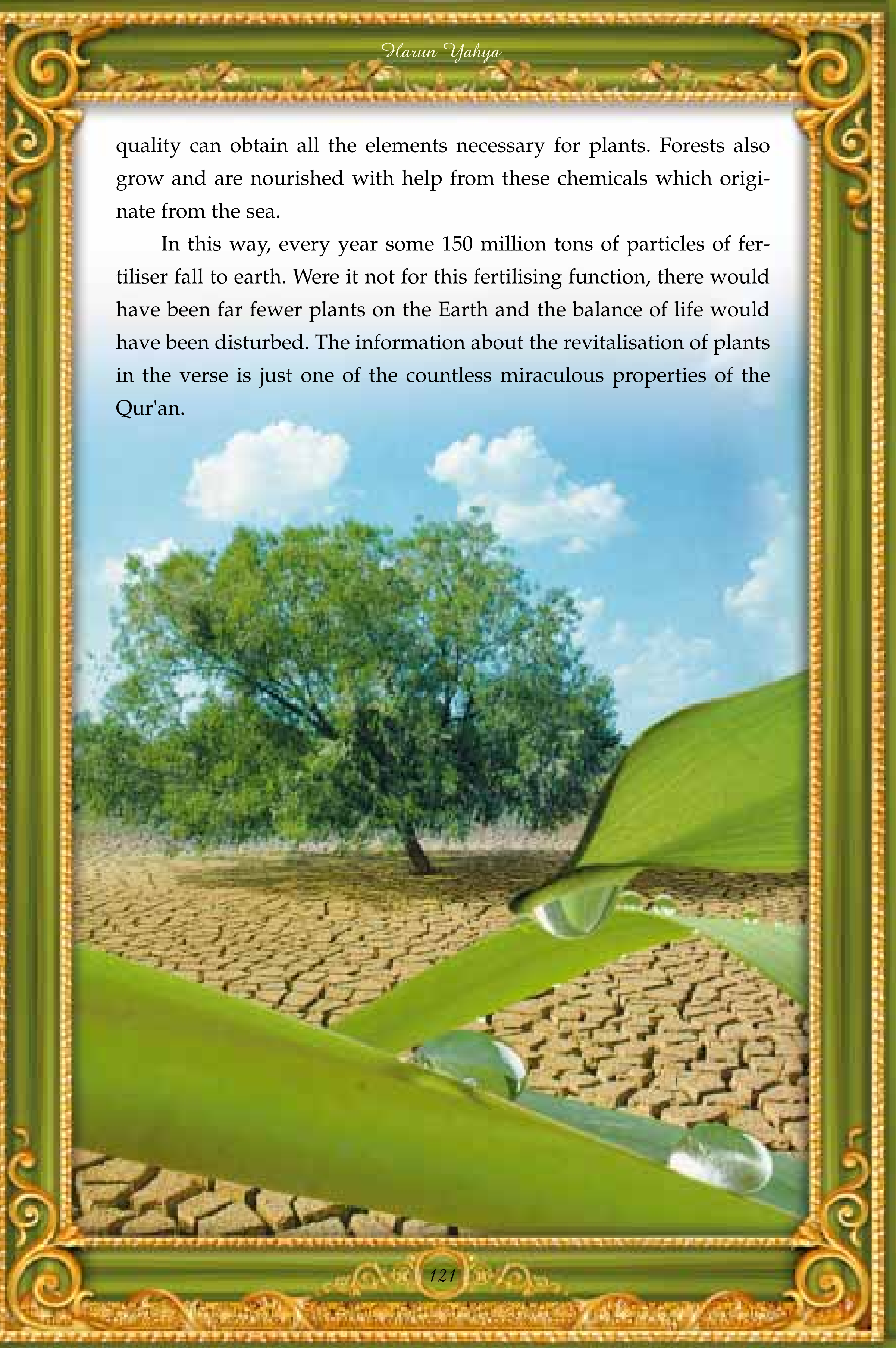
As well as bringing water, an essential requirement for living things, to the earth, the rain also has a fertilising property. **Drops of rain which evaporate from the sea and reach the clouds contain certain substances which "revitalise" dead soil. These raindrops with such "revitalising" properties are called "surface tension droplets."** These form from the top layer of the surface of the sea, called the micro-layer by biologists; in this surface layer, less than one-tenth of a millimetre thick, are found large quantities of organic waste formed from the decomposition of microscopic algae and zooplanktons. Some of these wastes collect and absorb elements such as phosphorus, magnesium and potassium, which are rarely found in sea water, as well as heavy metals such as copper, zinc, cobalt and lead. Seeds and plants on the surface of the Earth receive large quantities of the mineral salts and elements they need to grow from these raindrops. The Qur'an refers to this in these terms:

And *We sent down blessed water from the sky a*nd made gardens grow by it and grain for harvesting. (Qur'an, 50:9)

These salts which descend with the rain are examples in miniature of fertilisers traditionally used to enhance productivity (calcium, magnesium, potassium etc.). Heavy metals of the kind found in aerosols create elements which increase productivity during growth and production of plants. In short, **rain is an important fertiliser**. With the fertiliser provided by rain alone, within a hundred years, a soil of poor

quality can obtain all the elements necessary for plants. Forests also grow and are nourished with help from these chemicals which originate from the sea.

In this way, every year some 150 million tons of particles of fertiliser fall to earth. Were it not for this fertilising function, there would have been far fewer plants on the Earth and the balance of life would have been disturbed. The information about the revitalisation of plants in the verse is just one of the countless miraculous properties of the Qur'an.



THE FORMATION OF HAIL, THUNDER AND LIGHTNING

***… He sends down mountains from the sky with hail inside them*, striking with it anyone He wills and averting it from anyone He wills. *The brightness of His lightning almost blinds the sight.* (Qur'an, 24:43)**

The above verse refers to hail and lightning. When the formation of hail and lightning are examined, it can be seen that an important meteorological truth is being indicated in this verse. About the formation of lightning and hail, the book *Meteorology Today* says that a cloud becomes electrified as hail falls through a region in the cloud of supercooled droplets and ice crystals. Liquid droplets freeze and release latent heat as they collide with a hailstone. This keeps the surface of the hailstone warmer than that of the surrounding ice crystals. An important phenomenon occurs when the hailstone comes in contact with an ice crystal: Electrons flow from the colder object toward the warmer one. In this way, the hailstone becomes negatively charged. This effect also occurs when supercooled droplets come in contact with a hailstone and small pieces of positively charged ice break off. These particles, which are lighter and positively charged, are carried to the upper part of the cloud by currents of air. The hail has a negative charge now, and falls towards the bottom of the cloud, thus the lower part of the cloud becomes negatively charged. These negative charges are then discharged as lightning. It may be concluded from this that hail is the main factor in the formation of lightning.[61]

In the following verse, however, attention is drawn to the link between rain clouds and lightning, and to the order of formation, information that parallels that discovered by science:

Or [their likeness is] that of *a storm-cloud in the sky, full of darkness, thunder and lightning*. They put their fingers in their ears against the thunderclaps, fearful of death… (Qur'an, 2:19)

Rain clouds are tremendous masses covering 20 to 260 square metres (10 to 100 square miles) and reaching great vertical heights of 9,000 to 12,000 metres (30,000 to 40,000 ft.). Due to these extraordinary dimensions, the lower part of these clouds are dark. It is impossible for the Sun's rays to pass through them, because of the large quantities of water and ice particles they contain. Very little solar energy therefore reaches the Earth through the clouds, which is why the clouds appear dark to someone looking up at them.[62]

The stages of the formation of thunder and lightning after that darkness, mentioned in the verse, are as follows: An electrical charge forms inside the rain cloud. This comes about as a result of such processes as freezing, the division of raindrops and charge formation during contact. The accumulation of such electrical charges, when the air between becomes unable to insulate them, leads to a great spark, a discharge between the positive and negative fields. The voltage between two oppositely charged areas can reach 1 billion volts. The spark can also form within the cloud, can cross between two clouds, from a positively charged area to a negative one, or be discharged from the cloud to the ground. These sparks form dazzling lightning strikes. This sudden increase in the electrical charge along the line of lightning causes intense heat (10,000 degrees Celsius [18,030 degrees Fahrenheit]). As a result, there is a sudden expansion of the air, which in turn causes the loud noise associated with thunder.[63]

As has been discussed, dark layers, followed by the electrically charged sparks known as lightning, and then the loud noise called thunder, form within a rain cloud. Everything modern science has established about clouds, and has to say about the causes of thunder and lightning, is in complete accord with the descriptions in the Qur'an.

WINDS THAT FECUNDATE

In one verse of the Qur'an, the "fecundating" characteristic of the winds, and the resulting formation of rain are mentioned.

And *We send the fecundating winds*, then cause water to descend from the sky, therewith providing you with water in abundance. (Qur'an, 15:22)

This verse points out that the first stage in the formation of rain is wind. Until the beginning of the 20th century, the only relationship known between the wind and the rain was that it was the wind that drove the clouds. However, modern meteorological findings have demonstrated the "fecundating" role of the wind in the formation of rain.

As explained earlier, this fecundating function of the wind works in the following way:

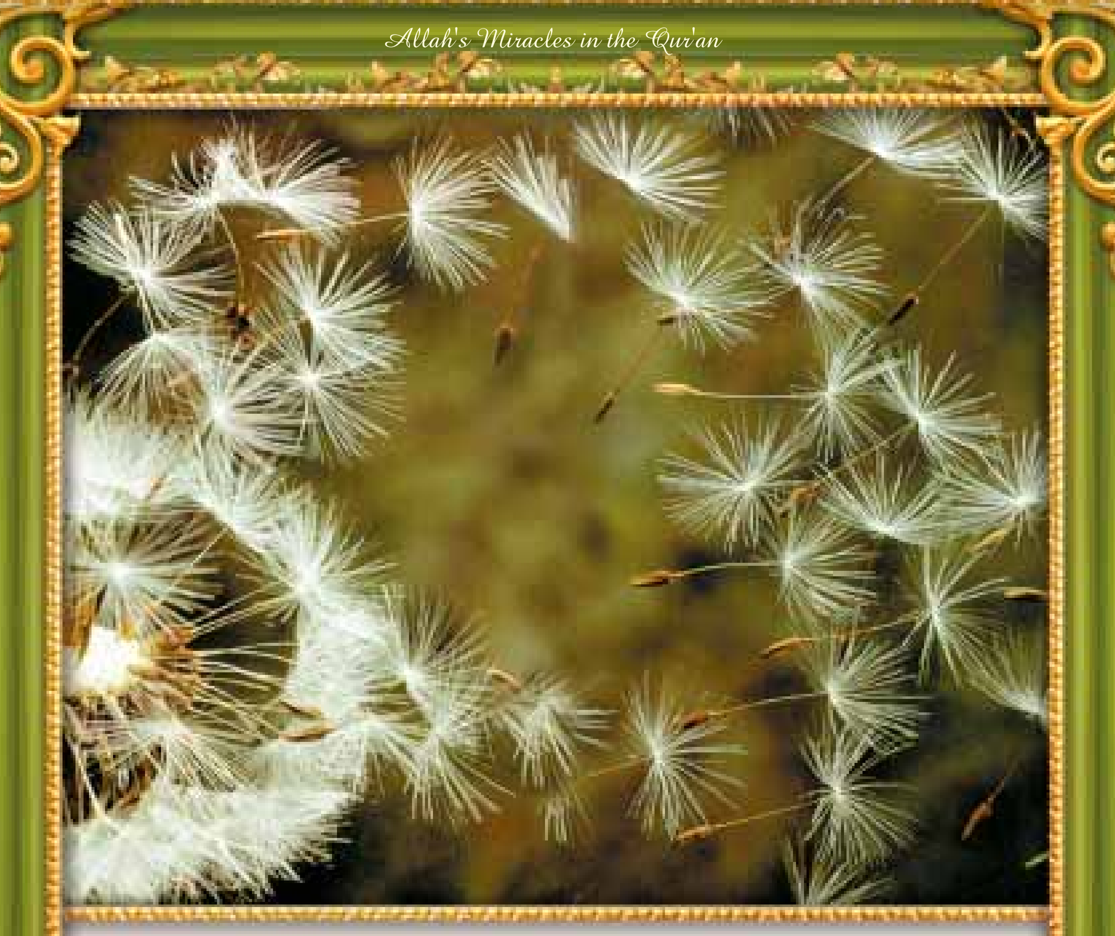
On the surface of oceans and seas, a large number of air bubbles form because of the water's foaming action. The moment these bubbles burst, thousands of tiny particles, with a diameter of just one hundredth of a millimetre, are thrown up into the air. These particles, known as "aerosols," mix with dust carried from the land by the wind, and are carried to the upper layers of the atmosphere. These particles carried to higher altitudes by winds come into contact with water vapour up there. Water vapour condenses around these particles and turns into water droplets. These water droplets first come together and form clouds, and then fall to the Earth in the form of rain. As mentioned, winds "fecundate" the water vapour floating in the air with the particles they carry from the sea, and eventually help the formation of rain clouds.

If winds did not possess this property, water droplets in the upper atmosphere would never form, and there would be no rain.

The most important point to be recognized here is that this critical

role of the wind in the formation of rain was stated centuries ago in the Qur'an, at a time when very little was known about natural phenomena…

The picture above shows the stages in the formation of a wave. Waves are formed by the wind blowing above the surface of the water. With the wind, water particles start to move in a circular motion. This movement soon forms waves, one after the other, and bubbles formed by the waves spread in the air. This is the first stage in the formation of rain. This process is declared in the verse as "We send the fecundating winds and then cause water to descend from the sky."



Further information provided in the verse about the fertilising quality of the wind is its role in the pollination of flowers. Many plants on Earth disperse their pollen by means of the wind in order to ensure the survival of their species. Several open-seeded plants, pine trees, palm and similar trees, seeded plants that produce flowers, and grass-like plants are entirely pollinated by the wind. The wind carries the pollen from the plants to others of the species, thus fertilising them.

Until recently, the way that the wind was able to fertilise plants was unknown. When it was realised, however, that plants are divided into males and females, the fertilising role of the wind was also discovered. This truth was already indicated in the Qur'an: "**... [He] sent down water from the sky by which *We have brought forth various different types of plants in pairs*.**" (Qur'an, 20:53)

THE STAGES OF WIND FORMATION

… and [in His] directing of the winds, there are signs for people who use their intellect. (Qur'an, 45:5)

Wind is a movement of air which forms between two different temperature centres. Due to the different pressures caused by different temperatures in the atmosphere, air constantly flows from areas of high pressure to areas of low pressure. If differences between pressure centres, in other words, temperatures in the atmosphere, are large, the flow of air, in other words, the wind, is very strong, so strong in fact that tornadoes which can inflict terrible damage can be formed.

What is astonishing here is that, despite there being belts of very different temperatures and pressures, such as the equator and the poles, thanks to the order in Allah's creation, our Earth is not exposed to disastrously fierce winds. Were the force of the winds that would otherwise blow between the poles and the equator not tempered, the Earth would become a dead planet constantly buffeted by tornadoes.

In the Arabic expression "*tasreefi al-riyaah*," in the above verse, the word "*tasreef*" means "turning over many times, directing, shaping something, managing, distributing." The choice of this word for the wind fully describes the way it blows in an ordered manner. It is also a clear expression of the fact that the wind does not blow by chance, of its own accord. It is Allah Who directs the winds in such a way as to make human life possible.

The diagram to the side shows the formation of air currents and winds on the Earth.

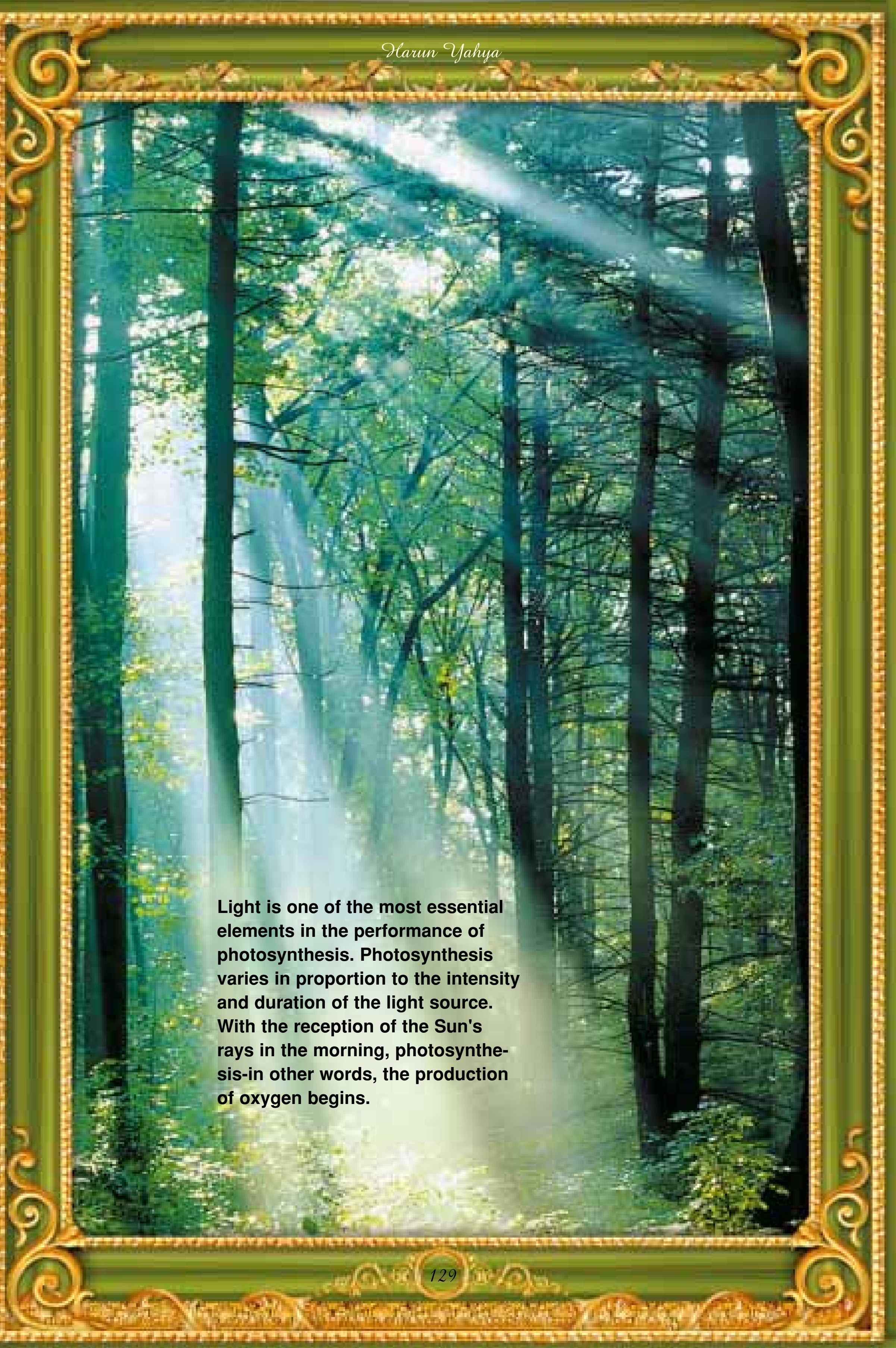
HOW THE PROCESS OF PHOTOSYNTHESIS BEGINS IN THE MORNING

And [I swear] by the night when it draws in, and by *the dawn when it breathes in.* (Qur'an, 81:17-18)

When plants undergo photosynthesis, they take in carbon dioxide, a harmful gas that human beings cannot consume, from the air, and give off oxygen instead. Oxygen, which we breathe and which is our basic source of life, is the main product of photosynthesis. Some 30% of the oxygen in the atmosphere is produced by plants on land, the remaining 70% being produced by plants and single-celled living things in the seas and oceans.

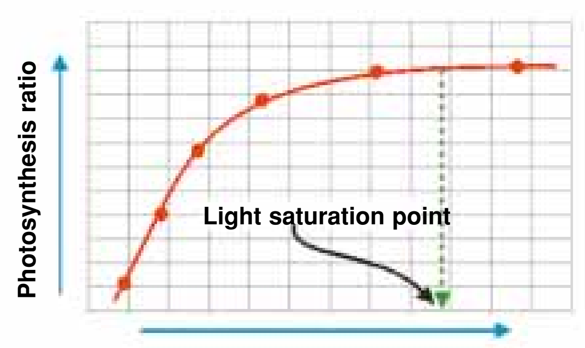
Photosynthesis is a complex process, and one which scientists have still not yet fully understood. This process cannot be observed with the naked eye, because the mechanism employs atoms and molecules. However, we can see the results of photosynthesis in the oxygen which enables us to breathe, and in the foodstuffs that keep us alive. Photosynthesis is a system which involves complicated chemical formulae and units of weight, and on very small scale, and consisting of the most sensitive equilibriums. There are trillions of chemical laboratories that carry out this process in all the green plants around us. Furthermore, plants have been meeting our oxygen, food and energy needs non-stop for millions of years.

The productivity of photosynthesis is measured by the level of oxygen output. The greatest point is in the morning, when the Sun's rays are most concentrated. At dawn, the leaves begin to sweat, and photosynthesis increases accordingly. In the afternoon, however, the opposite applies; in other words photosynthesis slows down, and respiration increases because as the temperature rises perspiration also



Light is one of the most essential elements in the performance of photosynthesis. Photosynthesis varies in proportion to the intensity and duration of the light source. With the reception of the Sun's rays in the morning, photosynthesis-in other words, the production of oxygen begins.





Photosynthesis is the use by plants and sometimes by certain bacteria and single-cell life forms of the Sun's rays in order to produce sugar (carbohydrate) from carbon dioxide and water. As a result of this reaction, the energy in the Sun's rays is stored inside the sugar molecule produced. The following formula summarises the reaction that takes place during the process by which unusable solar energy is transformed into usable chemical energy:
6H2O + 6CO2 ---PHOTOSYNTHESIS---> C6H12O6+ 6O2

(6 water molecules + 6 carbon dioxide molecules are turned into 1 sugar molecule and 6 oxygen molecules by means of photosynthesis.)

increases. At night, as the temperature falls, perspiration declines and the plant rests.

The term "*itha tanaffasa*" in Surat at-Takwir, in reference to the morning hours, in other words, "**when it breathes in,**" is a metaphorical reference to breathing, respiration, or breathing deeply. This term particularly emphasises the way that the production of oxygen begins in the morning, and that the greatest levels of oxygen, essential for respiration, are given off at that time. The importance of the phenomena is also emphasised by the way that Allah swears upon it. The way that Allah indicates the action of photosynthesis, among the most important discoveries of the 20th century, in this verse, is another of the scientific miracles of the Qur'an.



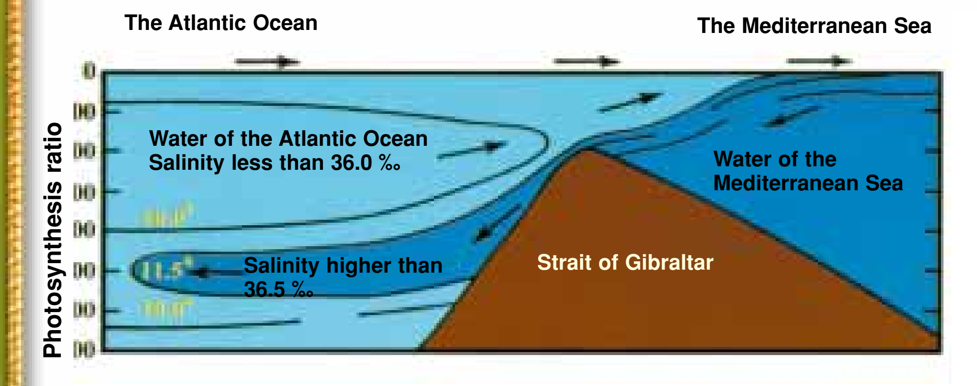
THE SEPARATE SEAS

One of the properties of seas that has only recently been discovered is related in a verse of the Qur'an as follows:

He has let loose the two seas, converging together, with a barrier between them they do not break through. (Qur'an, 55:19-20)

This property of the seas, that is, that they meet and yet do not intermix, has only very recently been discovered by oceanographers. Because of the physical force called "surface tension," the waters of neighbouring seas do not mix. Caused by the difference in the density of their waters, surface tension prevents them from mingling with one another, just as if a thin wall were between them.[64]

It is interesting that, during a period when there was little knowledge of physics, and of surface tension, or oceanography, this truth was revealed in the Qur'an.



There are large waves, strong currents, and tides in the Mediterranean Sea and the Atlantic Ocean. Mediterranean Sea water enters the Atlantic by Gibraltar. But their temperature, salinity, and densities do not change, because of the barrier that separates them.

THE DARK DEPTHS OF THE SEAS AND INTERNAL WAVES

Or [the unbelievers' state] are like *the darkness of a fathomless sea which is covered by waves above which are waves above which are clouds*, layers of darkness, one upon the other. If he puts out his hand, he can scarcely see it. Those Allah gives no light to, they have no light. (Qur'an, 24:40)

In deep seas and oceans, the darkness is found at a depth of 200 meters (660 feet) and deeper. At this depth, there is almost no light, and below a depth of 1,000 meters (3,280 feet) there is no light at all.[65]

Today, we know about the general formation of the sea, the characteristics of the living things in it, its salinity, as well as the amount of water it contains, and its surface area and depth. Submarines and special equipment, developed with modern technology, have enabled scientists to obtain such information.

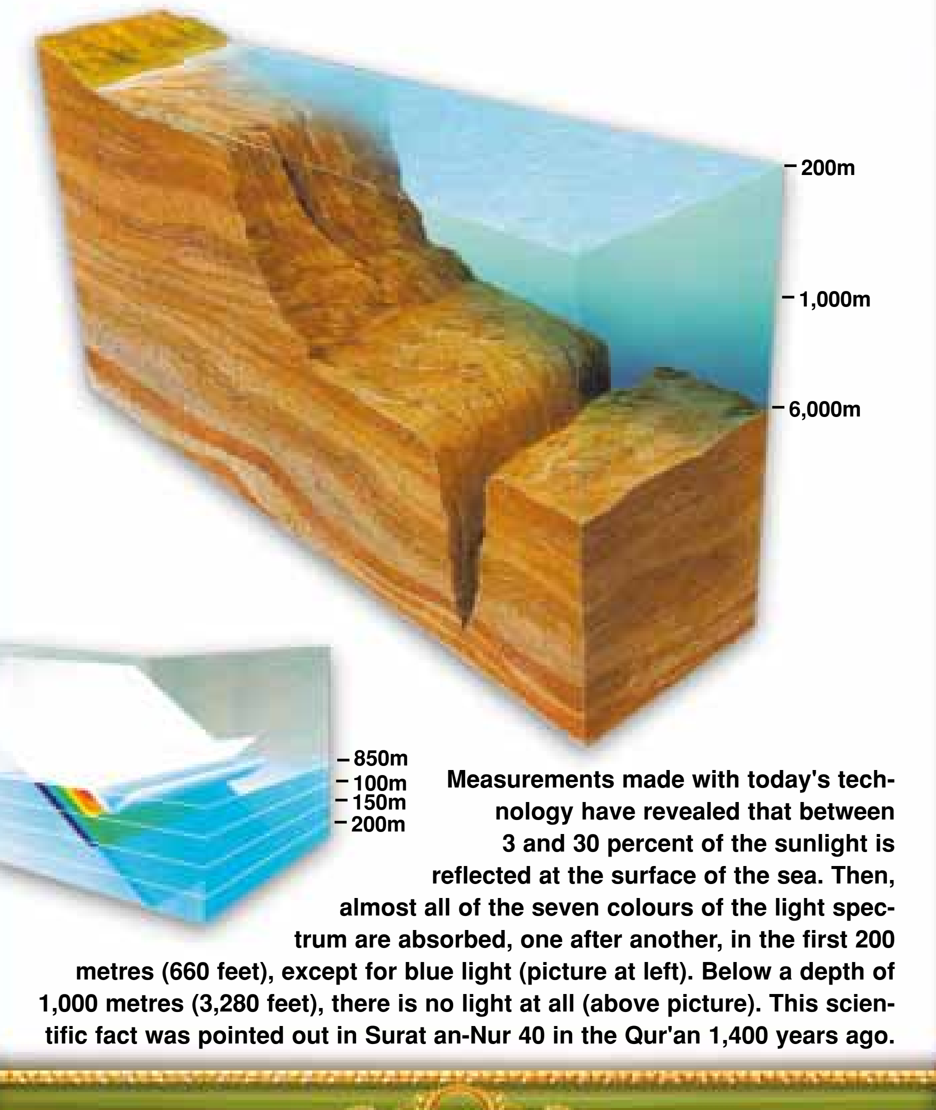
Human beings are not able to dive to a depth of more than 70 meters (230 feet) without the aid of special equipment. They cannot survive unaided in the dark depths of the oceans, such as at a depth of 200 meters (660 feet). For these reasons, scientists have only recently been able to discover detailed information about the seas. However, that the depth of the sea is dark was revealed in the Qur'an 1,400 years ago. It is certainly one of the miracles of the Qur'an that such information was given at a time where no equipment to enable man to dive into the depths of the oceans was available.

In addition, the statement in Surat an-Nur 40 "**...like the darkness of a fathomless sea which is covered by waves above which are waves above which are clouds...**" draws our attention to another miracle of the Qur'an.

Scientists have only recently discovered that there are sub-surface waves, which "occur on density interfaces between layers of different

densities." These internal waves cover the deep waters of seas and oceans because deep water has a higher density than the water above it. Internal waves act like surface waves. They can break, just like surface waves. Internal waves cannot be discerned by the human eye, but they can be detected by studying temperature or salinity changes at a given location.[66]

The statements in the Qur'an run parallel precisely the above explanation. Certainly, this fact, which scientists has discovered very recently, shows once again that the Qur'an is the word of Allah.



Measurements made with today's technology have revealed that between 3 and 30 percent of the sunlight is reflected at the surface of the sea. Then, almost all of the seven colours of the light spectrum are absorbed, one after another, in the first 200 metres (660 feet), except for blue light (picture at left). Below a depth of 1,000 metres (3,280 feet), there is no light at all (above picture). This scientific fact was pointed out in Surat an-Nur 40 in the Qur'an 1,400 years ago.

THE REGION RESPONSIBLE FOR OUR MOVEMENTS

No indeed! If he does not stop, ***We will grab him by the forelock, a lying, sinful forelock*****. (Qur'an, 96:15-16)**

The expression "**the lying, sinful forelock**" in the above verse is most interesting. Research carried out in recent years has revealed that the prefrontal area, which is responsible for the management of particular functions of the brain, lies in the frontal part of the skull. Scientists only discovered the functions of this area, which the Qur'an pointed out 1,400 years ago, in the last 60 years. If we look inside to the brain at the front of the head, we will find the frontal area of the cerebrum. A book entitled *Essentials of Anatomy and Physiology,* which includes the results of the latest research on the functions of this area, says:

> The motivation and the foresight to plan and initiate movements occur in the anterior portion of the frontal lobes, the prefrontal area. This is a region of association cortex… [67]

The book also says:

> In relation to its involvement in motivation, the prefrontal area is also thought to be the functional center for aggression…[68]

So, this area of the cerebrum is responsible for planning, motivation, and initiating good and sinful behaviour, and is responsible for telling lies and the truth.

It is clear that the statement "the lying, sinful forelock" corresponds completely to the above explanations. Again, this fact which scientists have only discovered in the last 60 years, was stated by Allah in the Qur'an centuries ago.

HEARTS FIND PEACE IN THE REMEMBRANCE OF ALLAH

According to research by David B. Larson, of the American National Health Research Center, and his team, comparisons of devout and non-religious Americans have given very surprising results. For instance, religious people suffer 60% less heart disease than those with little or no religious belief, the suicide rate among them is 100% lower, they suffer far lower levels of high blood pressure, and this ratio is 7:1 among smokers.[69]

It was reported in one study published in *the International Journal of Psychiatry in Medicine*, an important scientific source in the world of medicine, that people who describe themselves as having no religious beliefs become ill more frequently and have shorter life spans. According to the results of the research, those with no beliefs are twice as likely to suffer stomach-intestine diseases than believers, and their mortality rate from respiratory diseases is 66% times higher than that of believers.

Secular psychologists tend to refer to similar figures as "psychological effects." This means that belief raises peoples' spirits, and this contributes to health. This explanation may indeed be reasonable, but a more striking conclusion emerges when the subject is examined. Belief in Allah is much stronger than any other psychological influence. The wide-ranging research into the connection between religious belief and physical health carried out by Dr. Herbert Benson of the Harvard Medical Faculty has produced surprising conclusions in this area. Despite not being a believer himself, Dr. Benson has concluded that worship and belief in Allah have a more positive effect on human health than that observed in anything else. Benson states that he has concluded that no belief provides as much mental peace as belief in Allah.[70]

What is the reason for this connection between belief and the human soul and body? The conclusion reached by the secular researcher Benson is, in his own words, that the human body and mind are regulated to believe in Allah.[71]

This fact, which the world of medicine has slowly begun to appreciate, is a secret revealed in the Qur'an in these words: "**... Only in the remembrance of Allah can the heart find peace.**" (Qur'an, 13:28) The reason why those who believe in Allah, who pray to and trust in Him, are psychologically and physically healthier is that they behave in accordance with the purpose of their creation. Philosophies and systems which contradict human creation always lead to pain and unhappiness.

Modern medicine is now tending towards the realization of this truth. As Patrick Glynn put it: "[S]cientific research in psychology over the past twenty-five years has demonstrated that,... religious belief is one of the most consistent correlates of overall mental health and happiness."[72]



FORGIVENESS ACCORDING TO THE MORALS OF ISLAM AND ITS BENEFITS ON HEALTH

One of the moral traits recommended in the Qur'an is forgiveness:

Hold to forgiveness, command what is right, and turn away from the ignorant. (Qur'an, 7: 199)

In another verse Allah commands: "**… They should rather pardon and overlook. Wouldn't you love Allah to forgive you? Allah is Ever-Forgiving, Most Merciful.**" (Qur'an, 24:22)

Those who do not abide by the moral values of the Qur'an find it very difficult to forgive others. Because, they are easily angered by any error committed. However, Allah has advised the faithful that forgiveness is more proper:

The repayment of a bad action is one equivalent to it. But if someone pardons and puts things right, his reward is with Allah… (Qur'an, 42:40)

…. But if you pardon and exonerate and forgive, Allah is Ever-Forgiving, Most Merciful. (Qur'an, 64: 14)

It has also been revealed in the Qur'an that forgiveness is a superior moral trait: "**But if someone is steadfast and forgives, that is the most resolute course to follow**." (Qur'an, 42:43) For that reason, believers are forgiving, compassionate and tolerant people who, as revealed in the Qur'an, "**control their rage and pardon other people**." (Qur'an, 3:134)

Believers' notion of forgiveness is very different to that of those who do not live by the morals of the Qur'an. Even though many people may say they have forgiven someone who has offended them, it nevertheless takes a long time to free themselves of the hatred and anger in their hearts. Their behaviour tends to betray that anger. On the



other hand, the forgiveness of believers is sincere. Because believers know that human beings are tried in this world, and learn by their mistakes, they are tolerant and compassionate. Moreover, believers are also capable of forgiveness even when they are in the right, and the other in the wrong. When forgiving, they make no distinction between large errors and small ones. Someone may cause severe losses to them by mistake. However, believers know that everything takes place under the command of Allah, and according to a specific destiny, and therefore, they surrender themselves to these developments, never acquiescing to anger.

According to recent research, American scientists established that those capable of forgiveness are healthier in both mind and body. Dr. Frederic Luskin, who holds a Ph.D. in Counselling and Health Psychology from Stanford University, and his team, studied 259 people living in the city of San Francisco. The scientists invited the subjects to attend six one-and-a-half-hour sessions, and aimed to instruct the subjects in forgiveness during their conversations.

The subjects of the experiments stated that they suffered less after forgiving people who had wronged them. The research showed that people who learned to forgive feel much better, not only emotionally but also physically. For example, it was established that after the experiment psychological and physical symptoms such as stress-related backache, insomnia and stomachaches were significantly reduced in these individuals.

In his book, *Forgive for Good*, Dr. Frederic Luskin describes forgiveness as a proven recipe for health and happiness. The book describes how forgiveness promotes such positive states of mind as hope, patience and self-confidence by reducing anger, suffering, depression and stress. According to Dr. Luskin, harboured anger causes observable physical effects in the individual. He goes on to say that:

> The thing about long-term or unresolved anger, is we've seen it resets the internal thermostat. When you get used to a low level of anger all the time, you don't recognize what's normal. It creates a kind of adrenaline rush that people get used to. It burns out the body and makes it difficult to think clearly-making the situation worse.[73]

In addition, Dr. Luskin says, when the body releases certain enzymes during anger and stress, cholesterol and blood pressure levels go up-not a good long-term disposition to maintain the body in.[74]

An article called "Forgiveness," published in the September-October 1996 edition of *Healing Currents Magazine*, stated that anger towards an individual or an event led to negative emotions in people, and harmed their emotional balance and even their physical health.[75] The article also states that people realise after a while that the anger is a nuisance to them, and wish to repair the damage to the relationship. So, they take steps to forgive. It is also stated that, despite all they endure, people do not want to waste the precious moments of their life in anger and anxiety, and prefer to forgive themselves and others.[76]

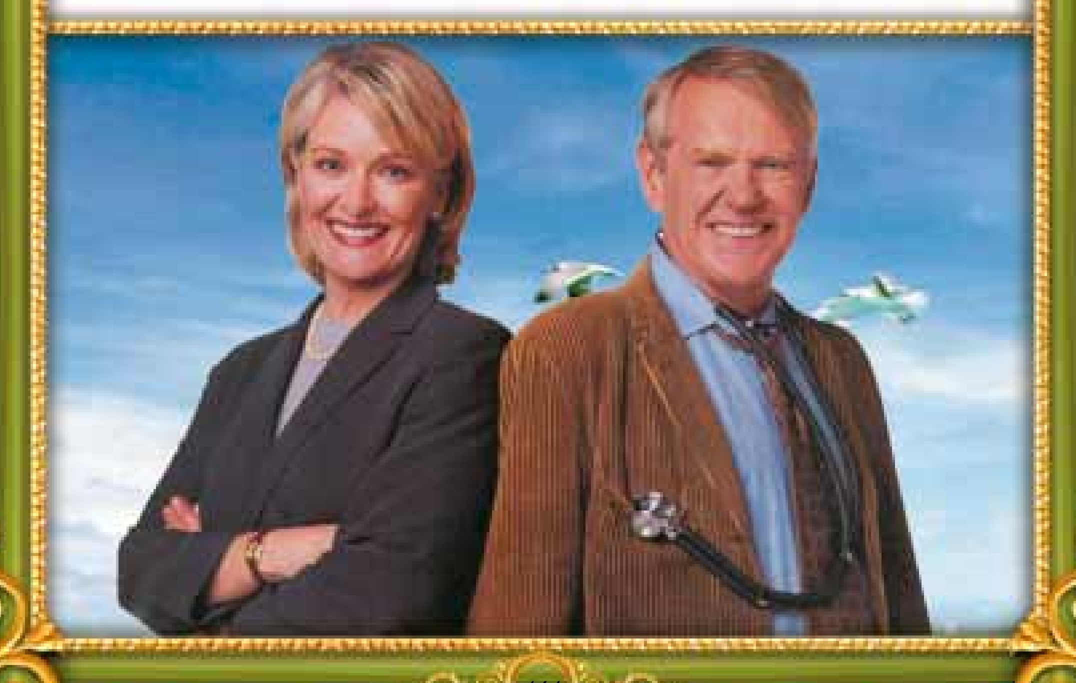
In another study involving 1,500 people depression, stress and mental illness were observed to be less frequent in religious people. Dr.

Herbert Benson, who conducted the research, linked this to the way religions encourage "forgiveness," and went on to say:

> There's a physiology of forgiveness… When you do not forgive, it will chew you up.[77]

According to an article titled, "Anger Is Hostile to Your Heart," published in the *Harvard Gazette*, anger is extremely harmful to the heart. Ichiro Kawachi, an assistant professor of medicine, and his team scientifically demonstrated this with various tests and measurements. As a result of their research, they established that grumpy old men had three times the risk of heart disease than their more tempered peers. "The tripling of risk," Kawachi says, "involves high levels of anger, explosive anger that includes smashing things and wanting to hurt someone in a fight."[78]

Researchers believe that release of stress hormones, increased oxygen demand by the heart's muscle cells, and added stickiness of blood platelets, which leads to clots explain how anger increases the chance of a heart attack.[79] Furthermore, at times of anger, the pulse rises above its normal level, and leads to increased blood pressure in the arteries, and thus to a greater risk of heart attack.



According to researchers, anger and hostility can also trigger the production of proteins linked to inflammation in the blood. The journal *Psychosomatic Medicine* suggested that the emotion triggers the production of inflammatory proteins, which may in turn be causing the hardening of the arteries, causing heart disease and stroke.[80] According to Associate Professor Edward Suarez of the Duke University Medical Centre in North Carolina, the protein interleukin 6 (or IL-6) is much higher in men who are angry and depressed. High blood levels of IL-6 lead to atherosclerosis, the build-up of fatty deposits in the lining of the walls of arteries.[81] According to Suarez, as well as factors such as smoking, high blood pressure, obesity and high cholesterol, heart disease is also linked to psychological states such as depression, anger and hostility.[82]

Another article, titled "Anger Raises Risk of Heart Attack," published in *The Times*, stated that a short temper might be a short cut to a heart attack, and that young men who reacted to stress by becoming angry were three times more likely to develop premature heart disease, and were five times more likely to have an early heart attack.[83] Scientists at John Hopkins University in Baltimore, Maryland, found that quick-tempered men are at risk of heart attack even if there is no family history of heart disease.[84]

All the available research shows that anger is a state of mind that seriously damages human health. Forgiveness, on the other hand, even if it comes hard to people, is pleasing, an aspect of superior morals, that eliminates all the harmful effects of anger, and helps the individual to enjoy a healthy life, both psychologically and physically. Forgiveness, of course, is one of a form of behaviour by which a person can stay healthy, and a positive virtue everyone should live by. However, the true aim of forgiveness-as in all else-must be to please Allah. The fact that the features of this sort of morality, and that the benefits of which have been scientifically identified, have been revealed in many verses of the Qur'an, is just one of the many sources of wisdom it contains.

HOW PRAYER ACCELERATES THE TREATMENT OF THE SICK

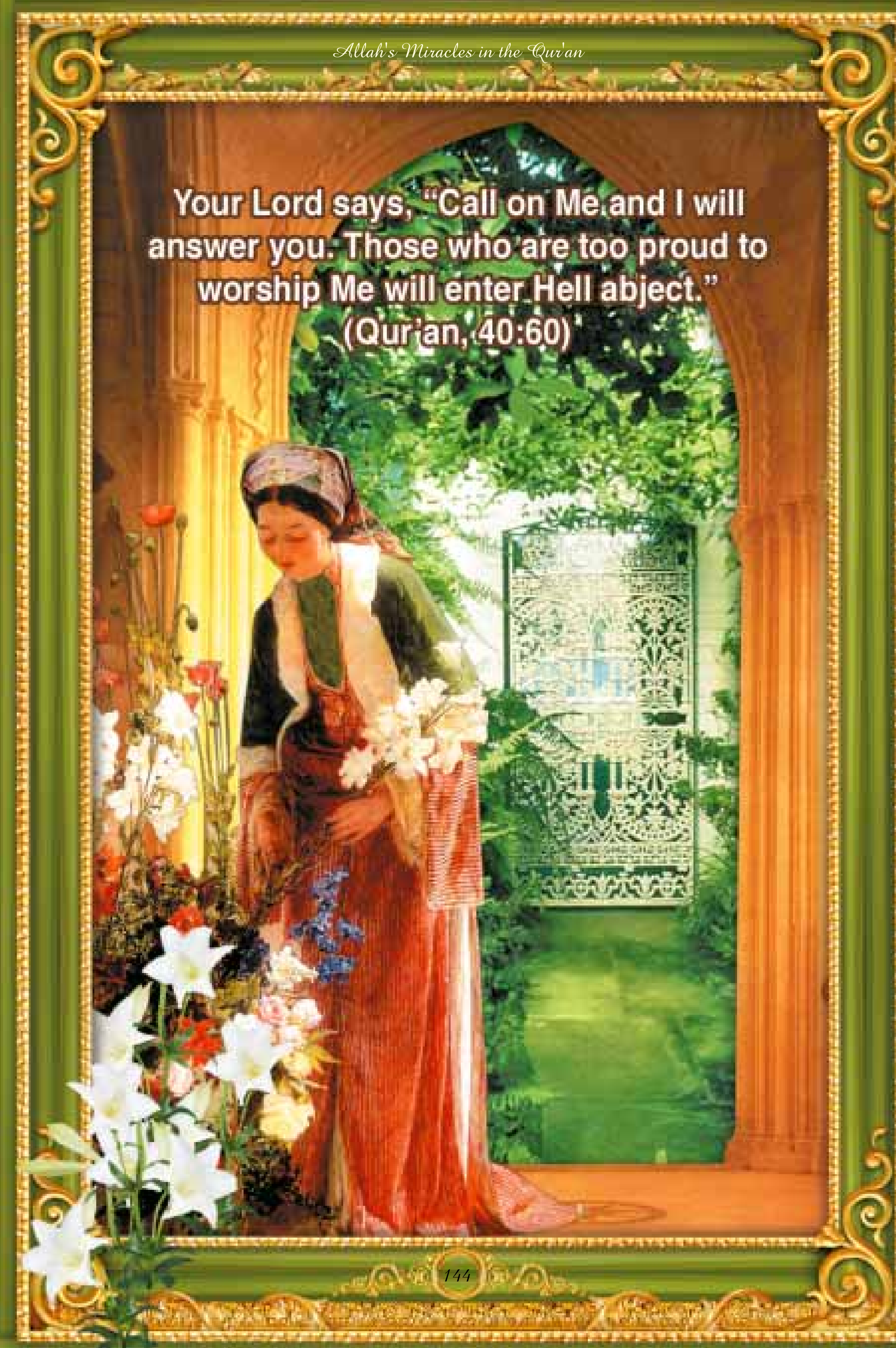
Your Lord says, "Call on Me and I will answer you. Those who are too proud to worship Me will enter Hell abject." (Qur'an, 40:60)

According to the Qur'an, prayer, meaning "calling, giving expression, requesting, seeking help," is a person's turning sincerely to Allah, and seeking help from Him, the Almighty, the Compassionate and Merciful, in the knowledge that he is a dependent being. Illness is one of those instances when a person feels this dependence most and draws closer to Allah. Furthermore, sickness is a test, devised in His Wisdom, that takes place by His will, and is a warning to remind people of the transience and imperfection of this life, and is also a source of recompense in the Hereafter for the patient and submissive.

Those without faith, on the other hand, imagine that the way to recovery is through doctors, medicines or the advanced technological capabilities of modern science. They never pause to think that it is Allah Who causes their physical system to function when they are in good health, or Who creates the healing medicines and doctors when they are ill. Many turn only to Allah when they arrive at the opinion that doctors and medicines are inadequate. People in such situations seek help only from Allah, realising that only He can free them from their difficulty. Allah has revealed this mindset in a verse:

When harm touches man, he calls on Us, lying on his side or sitting down or standing up. Then when We remove the harm from him he carries on as if he had never called on Us when the harm first touched him. In that way We make what they have done appear good to the profligate. (Qur'an, 10:12)

The fact is, however, that even in good health, or without tribulations or other difficulties, a person must pray and give thanks to Allah for the comforts, good health and all the other blessings He has imparted.


Your Lord says, "Call on Me and I will answer you. Those who are too proud to worship Me will enter Hell abject."
(Qur'an, 40:60)

One very important aspect of prayer is this: In addition to praying out loud, it is also important for a person to make every effort to pray through his or her deeds. Prayer by action means doing everything possible to attain a certain wish. For example, in addition to praying, a sick person may also have to visit an expert doctor, use medicines that will be of benefit, and receive hospital treatment if necessary, or some other form of special care. Because, Allah has linked everything that happens in this world to specific causes. Everything in the world and in the universe happens in accordance with these causes. Therefore, the individual must take the requisite measures in accordance with these causes, and yet await the outcome from Allah, with humility, submission and patience, in the knowledge that it is He Who brings about their results.

The positive effect of faith and prayer on the sick and the way these accelerate treatment is a matter that has attracted the attention of and is recommended by doctors. Under the heading "God and Health: Is Religion Good Medicine? Why Science Is Starting to Believe," the 10 November, 2003, edition of the famous magazine *Newsweek* took the curative effect of religion as its cover story. It reported that faith in Allah raised people's morale and helped them recover more easily, and that science had also begun to believe that people with religious faith recover more easily and quickly. According to a *Newsweek* survey, 72% of Americans say they believe that praying can cure someone and that prayer facilitates recovery. Research in Great Britain and the USA has also concluded that prayer reduces patients' symptoms and accelerates the recovery process.

According to research conducted at Michigan University, depression and stress are observed to lesser extent in the devout. And, according to findings at Rush University in Chicago, the early death rate among people who worship and pray regularly is some 25% lower than in those with no religious convictions. Another study conducted at Duke University on 750 people, who underwent angiocardiography,

proved scientifically the "curative power of prayer." It was established that the death rate among heart patients who prayed decreased by 30% within a year after their operations.

Examples of the prayers mentioned in the Qur'an are:

And Ayyub when he called out to his Lord, "Great harm has afflicted me and You are the Most Merciful of the merciful," We responded to him and removed from him the harm which was afflicting him and restored his family to him, and the same again with them, as a mercy direct from Us and a Reminder to all worshippers. (Qur'an, 21:83-84)

And Dhu'n-Nun [Yunus] when he left in anger and thought We would not punish him. He called out in the pitch darkness: "There is no deity but You! Glory be to You! Truly I have been one of the wrongdoers." We responded to him and rescued him from his grief. That is how We rescue the believers. (Qur'an, 21:87-88)

And Zakariyya when he called out to his Lord, "My Lord, do not leave me on my own, though You are the Best of Inheritors." We responded to him and gave him Yahya, restoring for him his wife's fertility. They outdid one another in good actions, calling out to Us in yearning and in awe, and humbling themselves to Us. (Qur'an, 21:89-90)

Nuh called out to Us and what an excellent Responder We are! (Qur'an, 37:75)

As has already been stated, prayer must not only be for alleviation of sickness, or other mundane problems. A sincere believer must always pray to Allah and accept whatever comes from Him. The fact that the benefits of prayer revealed in many verses of the Qur'an are now being recognised scientifically, once again reveals the miraculous nature of the Qur'an.

If My servants ask you about Me, I am near. I answer the call of the caller when he calls on Me. They should therefore respond to Me and believe in Me so that hopefully they will be rightly guided. (Qur'an, 2:186)

STRESS AND DEPRESSION: THE RESULTS OF NOT ABIDING BY THE RELIGION

"But if anyone turns away from My reminder, his life will be a dark and narrow one..." (Qur'an, 20:124)

When Allah desires to guide someone, He expands his breast to Islam. When He desires to misguide someone, He makes his breast narrow and constricted as if he were climbing up into the sky. That is how Allah defiles those who have no faith. (Qur'an, 6:125)

The failure of irreligious people in submitting themselves to Allah causes them to be in a constant state of ill-ease, anxiety and stress. As a consequence, they are afflicted by various psychological illnesses which reveal themselves in their physical selves. Their bodies wear down more quickly, and they age rapidly and degenerate.

However, since believers are psychologically healthy, they do not fall prey to stress, or despondence, and their bodies are ever fit and healthy. The positive effects of their submitting to Allah, their trust in Him and fortitude, looking for the good in all things, and accepting what happens with the hope of His promise, are reflected in their physical selves. This, of course, applies only to those who live by the moral values of the Qur'an, and who truly comprehend the religion. Of course, they may fall ill and eventually grow old, but this natural process does not involve the psychological breakdown it does in others.

Stress and depression, regarded as the diseases of our time, not only cause psychological harm, but also manifests themselves in various physical defects. The common stress and depression-related problems are some forms of mental illness, drug addiction, insomnia, skin, stomach and blood pressure disorders, colds, migraines, a number of bone diseases, kidney imbalances, respiratory difficulties, allergies, heart attacks, and brain swelling. Of course, stress and depression are

not the only causes of these, but it has been scientifically proven that the origins of problems such as these are usually psychological.

Stress, which afflicts so many, is a state of mental anxiety caused by such feelings as fear, insecurity, overexcitement, worry and other pressures, that damages the body's equilibrium. When people become victims of stress, their bodies react and sound the alarm, and various biochemical reactions in the body are initiated: The level of adrenaline in the bloodstream rises; energy consumption and bodily reactions reach their maximum levels; sugar, cholesterol and fatty acids are deposited into the bloodstream; blood pressure rises and the pulse accelerates. When glucose is sent to the brain, cholesterol levels rise, and that all spells trouble for the body.

Because chronic stress, in particular, alters the normal functions of the body, it can cause serious harm. Due to stress, adrenalin and cortisol levels in the body rise to abnormal levels. Long-term increases in cortisol levels lead to the premature appearance of disorders such as diabetes, heart disease, high blood pressure, cancer, ulcers, respiratory diseases, eczema and psoriasis. The effects of high cortisol levels may even include the killing off of brain cells. The disorders caused by stress are described as follows in one source:

> There is an important relationship between stress and the tension and pain it gives rise to. The tension caused by stress leads to narrowing of the arteries, disruption of the flow of blood to certain regions of the head and a reduction in the amount of blood flowing to that region. If a tissue is deprived of blood this leads directly to pain, because a tense tissue on one side probably requiring greater amounts of blood and on the other side already having insufficient blood supply stimulates special pain receptors. At the same time substances such as adrenaline and norepinephrine, which affect the nervous system during stress, are secreted. These directly or indirectly increase and accelerate the tension in the muscles. Thus pain leads to tension, tension to anxiety, and anxiety intensifies pain.[85]

However, one of the most detrimental effects of stress is heart attacks. Research shows that aggressive, nervous, anxious, impatient, competitive, hostile and irritable people have a much higher incidence of heart attacks than people less inclined to these traits.[86]

The reason for this is that extreme stimulation of the sympathetic nervous system, initiated by the hypothalamus, also causes excessive secretion of insulin, and therefore the accumulation of insulin in the blood. This is a matter of vital importance. Because, none of the conditions that lead to coronary heart disease play such a definitive and harmful role as excess insulin in the blood.[87]

Scientists have recognized that the higher the level of stress, the more the positive effects of the red cells in the blood are weakened. According to an experiment developed by Linda Naylor, head of the Oxford University's technology transfer company, the negative effect of stress levels on the immune system can now be measured.

There is a close relationship between stress and the immune system. Physiological stress has an important effect on the immune system and results in its deterioration. When under stress, the brain increases production of the cortisol hormone in the body, which weakens the immune system. To put it another way, there is a direct relationship between the brain, the immune system and hormones. Experts in the field state:

> Studies on psychological or physical stress have revealed that at times of intense stress there is a fall in immunity response linked to the hormonal balance. It is known that the emergence and strength of many illnesses including cancer is linked to stress.[88]

In short, stress harms a human being's natural equilibrium. Constant exposure to this abnormal condition impairs the body's health, and leads to a wide variety of disorders. Experts classify the negative effects of stress on the human body under the following basic categories:

Anxiety and Panic: A feeling that events are spiralling out of control

Constantly increasing perspiration

Voice changes: Stammering, trembling speech

Hyperactivity: Sudden explosions of energy, weak diabetic control

Sleeping difficulty: Nightmares

Skin diseases: Spots, acne, fever, psoriasis and eczema

Gastrointestinal indications: Indigestion, nausea, ulcers

Muscular tension: Grinding or locking teeth, aches in the jaw, back, neck and shoulders

Low intensity infections: Colds etc.

Migraine

Palpitations, chest pain, high blood pressure

Kidney imbalances, holding water

Respiratory disorders, shortness of breath

Allergies

Joint pains

Dry mouth and throat

Heart attack

Weakening of the immune system

Shrinkage in the brain region

Feelings of guilt and lack of self-confidence

Confusion, inability to analyse correctly, poor thinking ability, weak memory

Extreme pessimism, believing that everything is going badly

Difficulty in moving or staying still, constant rhythm beating

Inability to concentrate or difficulty in so doing

Irritability, extreme sensitivity

Irrationality

Feelings of helplessness or hopelessness

Loss of or increased appetite

The fact that those who fail to abide by religious moral values experience "stress" is revealed by Allah in the Qur'an:

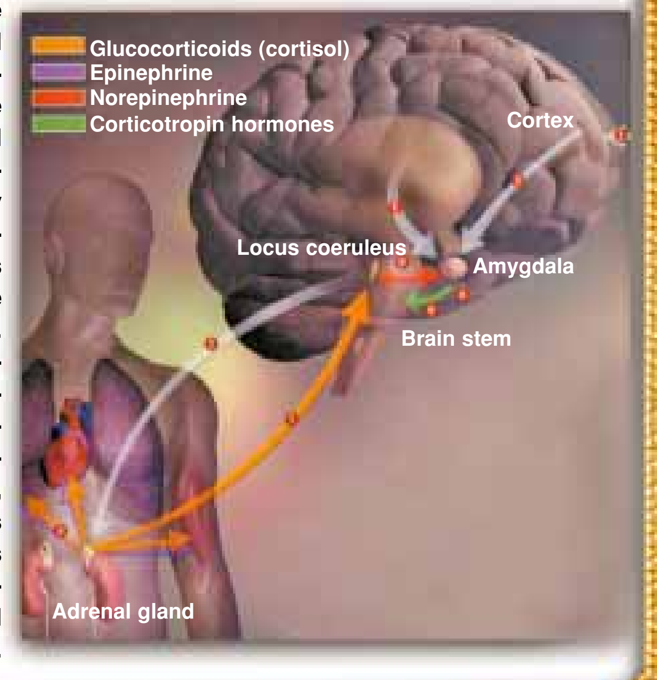
"But if anyone turns away from My reminder, his life will be a dark and narrow one…" (Qur'an, 20:124)

In another verse, Allah has revealed that **"… the Earth became narrow for them, for all its great breadth, and their own selves became constricted for them and they realised that there was no refuge from Allah except in Him…"** (Qur'an, 9:118)

This "dark and narrow" life, or stress, to give it the current name, is the outcome of non-believers' failure to abide by the moral values imparted by faith. Today, doctors maintain that a calm and self-assured composure are essential for protection from the effects of stress. A calm and peaceful disposition is only possible by living according to the Qur'an. Indeed, it has been revealed in many verses of the Qur'an that Allah imparts "**serenity**" upon the believers. (Qur'an, 2:248, 9:26, 40, 48:4, 18) Our Lord's promise to the faithful has been revealed as follows:

> **Anyone who acts rightly, male or female, being a believer, We will give them a good life and We will recompense them according to the best of what they did. (Qur'an, 16:97)**

As a result of physical or psychological stress, the individual's adrenal gland (the gland above each kidney) secretes large amounts of glucocorticoid hormones. These hormones increase the energy level of muscles, and temporarily halt such activities as growth-which are inessential at that moment. In cases of extreme physical and chronic psychological stress these hormones, which are otherwise of vital importance, can give rise to stress related disorders, such as high blood pressure, obesity, bone erosion and stomach ulcers.



A HUMAN BEING'S CREATION

Many diverse subjects are mentioned in the Qur'an while also inviting people to believe. Sometimes the heavens, sometimes animals, and sometimes plants are mentioned as evidence of Allah's existence. In many of these verses, people are called upon to consider their own creation. They are often reminded how man came into the world, which stages he has passed through, and what his essence is:

It is We Who have created you. Why, then, don't you accept the truth? Have you ever considered that [seed] which you emit? Is it you who create it? Or are We the Creator? (Qur'an, 56:57-59)

The miracle of man's creation is emphasised in many verses. Some of the information within these verses is so detailed that it was impossible for anyone living in the 7th century to have known it. Examples of these are as follows:

1. Man is not created from the entire semen, but only a very small portion of it (sperm).
2. It is the male that determines the sex of the baby.
3. The human embryo adheres to the mother's uterus like a leech.
4. The embryo develops in three dark regions in the uterus.

The items of information just quoted were far above the level of learning of the people living at that time. The discovery of these facts could only become possible by the technology attained in the 20th century.

Now, let us examine these items one at a time.

A Drop of Semen

Sperm undertake a journey into the mother's body until they reach the ovum. Only a thousand out of 250 million sperm succeed in reaching the ovum. At the end of this five-minute race, the ovum, half the size of a grain of salt, will let only one of the sperms in. That is, the sub-



In the picture to the left, we see semen ejected into the uterus. Only very few sperms out of 250 million sperms emitted from the male can make it to the ovum. The sperm that will fertilise the egg is the only one out of a thousand sperms that have managed to survive. The fact that man is made not from the entire semen-but only a small part of it-is related in the Qur'an with the expression, "a drop of ejected semen."

stance of man is not the whole semen, but only a small part of it. This is explained in the Surat al-Qiyama as follows:

> **Does man reckon he will be left uncontrolled [without purpose]? Was he not once a drop of ejected semen? (Qur'an, 75:36-37)**

As we have seen, the Qur'an informs us that man is made not from the entire semen, but only a small part of it. That the particular emphasis in this verse announces a fact only discovered by modern science is evidence that the Qur'an is the word of Allah.

The Mixture in the Semen

The fluid referred to as semen, which contains the sperm, does not consist of sperm alone. On the contrary, it is made up of a mixture of different fluids. Seminal fluid is a collection of substances secreted from the testicles, the seminal vesicles, the prostate gland and glands linked to the urinary tract. A detailed analysis of this fluid shows that it consists of a great many separate substances, such as citric acid, prostaglandin, flavin, ascorbic acid, ergothioneine, cholesterol, phos-

pholipids, fibrinolysin, zinc, phosphatase acid, phosphase, hyaluronidase and sperm. These fluids exercise different functions, such as containing the sugar necessary for providing energy for the sperm, neutralizing the acids at the entrance of the uterus, and providing a slippery substance for the easy movement of the sperm.

When semen is mentioned in the Qur'an, this fact, which was discovered by modern science, is also referred to, and semen is defined as a mixed fluid:

> ***We created man from a mingled drop* to test him, and We made him hearing and seeing. (Qur'an, 76:2)**

In the Qur'an, it is said that masculinity or femininity are created out of "a drop of semen which has been ejected." Until fairly recently, it was believed that a baby's sex was determined by the mother's cells. Science only discovered this information given in the Qur'an in the 20th century. This and many other similar details about the creation of man were stated in the Qur'an centuries ago.



In other verses, semen is again referred to as a mixture, and it is stressed that man is created from the "extract" of this mixture:

He Who has created all things in the best possible way. He commenced the creation of man from clay; then *He made his progeny from an extract of discarded fluid*. (Qur'an, 32:7-8)

The Arabic word "*sulaalah*," translated as "extract," means the essential or best part of something. By either meaning, it refers to "part of a whole." This shows that the Qur'an is the word of Allah, Who knows the creation of man to its minute details.

The Sex of the Child

Until fairly recently, it was thought that a baby's sex was determined by the mother's cells. Or at least, it was believed that the sex was determined by the male and female cells together. But, we are given different information in the Qur'an, where it is stated that masculinity or femininity is created out of "a drop of sperm which has been ejected."

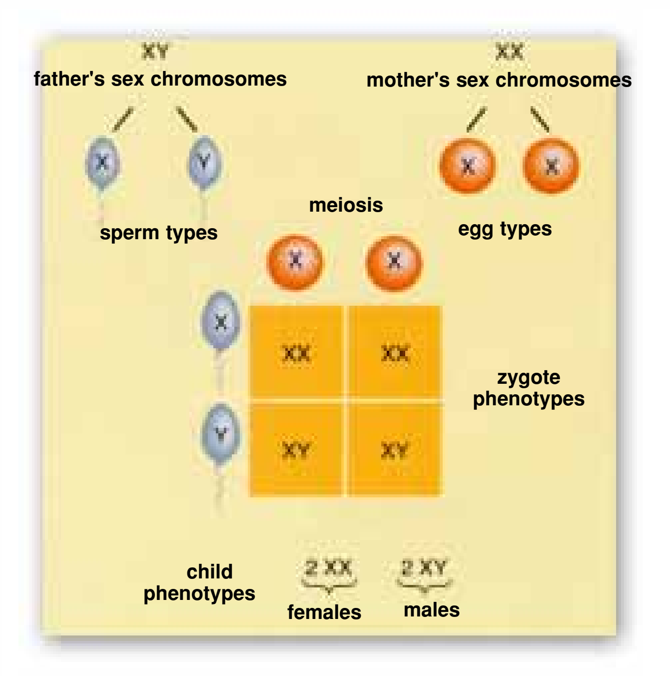
He has created both sexes, male and female from a drop of semen which has been ejected. (Qur'an, 53:45-46)

Wasn't he *a drop of ejaculated sperm*, then an embryo which He created and shaped, making from it both sexes, male and female? (Qur'an, 75:37-39)

The developing disciplines of genetics and molecular biology have scientifically validated the accuracy of this information given by the Qur'an. It is now understood that sex is determined by the sperm cells from the male, and that the female has no role in this process.

Chromosomes are the main elements in determining sex. Two of the 46 chromosomes that determine the structure of a human being are identified as the sex chromosomes. These two chromosomes are called "XY" in males, and "XX" in females, because the shapes of the chromosomes resemble these letters. The Y chromosome carries the genes that code for masculinity, while the X chromosome carries the genes that code for femininity.

The formation of a new human being begins with the cross combination of one of these chromosomes, which exist in males and females in pairs. In females, both components of the sex cell, which divides into two during ovulation, carry X chromosomes. The sex cell of a male, on the other hand, produces two different kinds of sperm, one that contains X chromosomes and the other Y chromosomes. If an X chromosome from the female unites with a sperm that contains an X chromosome, then the baby is female. If it unites with the sperm that contains a Y chromosome, the baby is male.



The Y chromosome carries characteristics of masculinity, while the X chromosome carries those of femininity. In the mother's egg, there is only the X chromosome, which determines female characteristics. In the semen from the father, there are sperms that include either X or Y chromosomes. Therefore, the sex of the baby depends on whether the sperm fertilising the egg contains an X or Y chromosome. In other words, as stated in the verse, the factor determining the sex of the baby is the semen, which comes from the father. This knowledge, which could not have been known at the time when the Qur'an was revealed, is evidence to the fact that the Qur'an is the word of Allah.

In other words, a baby's sex is determined by which chromosome from the male unites with the female's ovum.

None of this was known until the discovery of genes in the 20th century. Indeed, in many cultures, it was believed that a baby's sex was determined by the female. That was why women were blamed when they gave birth to girls.

Fourteen centuries before human genes were discovered, however, the Qur'an revealed information that denies this superstition, and referred to the origin of sex lying not with women, but with the semen deriving from men.

The *Alaq* Clinging to the Uterus

If we continue to examine the facts announced to us in the Qur'an, about the formation of human beings, we again encounter some very important scientific truth.

When the sperm of the male unites with the ovum of the female, the essence of the baby to be born is formed. This single cell, known as a "zygote" in biology, will instantly begin reproducing by dividing, and eventually become a "piece of flesh," called an embryo. This, of course, can only be seen by human beings with the aid of a microscope.



In the first phase of its development, the baby in the mother's womb is in the form of a zygote, which clings to the uterus in order to take nourishment from the mother's blood. In the picture above is a zygote, which looks like a piece of flesh. This formation, which has been discovered by modern embryology, was miraculously stated in the Qur'an 14 centuries ago with the word "*alaq*," which means "a thing that clings to some place" and is used to describe leeches that cling to a body to suck blood.

The embryo, however, does not spend its developmental period in a void. It clings to the uterus, with something like roots that is firmly fixed to the earth by its tendrils. Through this bond, the embryo can obtain the substances essential to its development from the mother's body.[89]

Here, an important miracle of the Qur'an is revealed. While referring to the embryo developing in the mother's womb, Allah uses the word "alaq" in the Qur'an:

Recite: In the name of your Lord Who created man from alaq. Recite: And your Lord is the Most Generous. (Qur'an, 96:1-3)

The meaning of the word "*alaq*" in Arabic is "a thing that clings to some place." The word is literally used to describe leeches that cling to a body to suck blood.

Certainly, the use of such a specific word for the embryo developing in the mother's womb, proves once again that the Qur'an is the word of Allah, the Lord of all the Worlds.

The Wrapping of Muscles over the Bones

Another important item of information provided in the verses of the Qur'an is the developmental stages of a human being in the mother's womb. It is stated in these verses that in the mother's womb, the bones develop first, and then the muscles form which wrap around them.

[We] then formed the drop into an embryo and *formed the embryo into a lump and formed the lump into bones and clothed the bones in flesh;* and then brought him into being as another creature. Blessed be Allah, the Best of Creators! (Qur'an, 23:14)

Embryology is the branch of science that studies the development of the embryo in the mother's womb. Until very recently, embryologists assumed that the bones and muscles in an embryo developed at the same time. Yet, advanced microscopic research conducted by virtue of new technological developments has revealed that the revelation of the



The bones of the baby completing its development in the mother's womb are clothed with flesh during one particular stage exactly as stated in the Qur'an.

Qur'an is word for word correct.

These observations at the microscopic level showed that the development inside the mother's womb takes place in just the way it is described in these verses. First, the cartilage tissue of the embryo ossifies. Then, muscular cells that are selected from amongst the tissue around the bones come together and wrap around the bones.

This event is described in a scientific publication titled *Developing Human* in the following words:

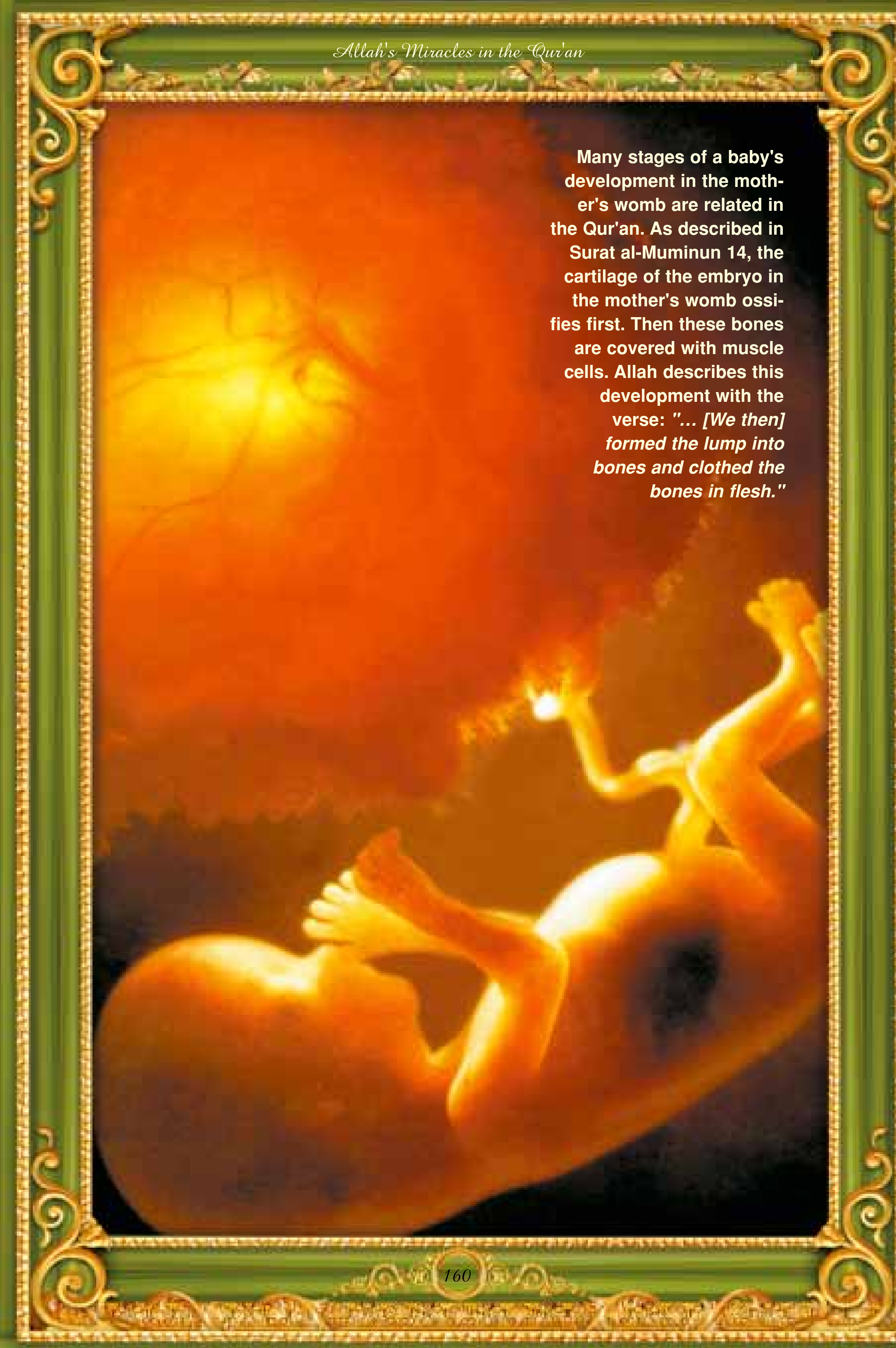
> … [T]he shape of the skeleton determines the general appearance of the embryo in the bones stage during the 7th week; muscles do not develop at the same time but their development follows soon after. The muscles take their positions around the bones throughout the body and therefore clothe the bones. Thus, the muscles take their well known forms and structures… The stage of clothing with muscle occurs during the 8th week…[90]

In short, developmental stages of man, as described in the Qur'an, are in perfect harmony with the findings of modern embryology.

Three Dark Stages of the Baby in the Womb

In the Qur'an, it is related that man is created through a three-stage process in the mother's womb.

> **… *He creates you stage by stage in your mothers' wombs in threefold darkness.* That is Allah, your Lord. Sovereignty is His. There is no deity but Him. So what has made you deviate? (Qur'an, 39:6)**



Many stages of a baby's development in the mother's womb are related in the Qur'an. As described in Surat al-Muminun 14, the cartilage of the embryo in the mother's womb ossifies first. Then these bones are covered with muscle cells. Allah describes this development with the verse: *"... [We then] formed the lump into bones and clothed the bones in flesh."*

The expression "*fee thulumaatin thalaathin*," translated into English as "a threefold darkness," indicates three dark regions involved during the development of the embryo. These are:

a) The darkness of the abdomen

b) The darkness of the womb

c) The darkness of the placenta

As we have seen, modern biology has revealed that the embryological development of the baby takes place in the manner revealed in the verse, in three dark regions. Moreover, advances in the science of embryology show that these regions consist of three layers each.

The lateral abdominal wall comprises three layers: the external oblique, the internal oblique, and transverses abdominis muscles.[91]

Similarly, the wall of the womb also consists of three layers: the epimetrium, the myometrium and the endometrium.[92]

Similarly again, the placenta surrounding the embryo also consists of three layers: the *amnion* (the internal membrane around the foetus), the *chorion* (the middle amnion layer) and the decidua (outer amnion layer.)[93]

It is also pointed out in this verse that a human being is created in the mother's womb in three distinct stages.

Indeed, modern biology has also revealed that the baby's embryological development takes place in three distinct regions in the mother's womb. Today, in all the embryology textbooks studied in departments of medicine, this subject is taken as an element of basic knowledge. For instance, in *Basic Human Embryology*, a fundamental reference text in the field of embryology, this fact is stated as follows:

> The life in the uterus has three stages: pre-embryonic; first two and a half weeks, embryonic; until the end of the eight week, and fetal; from the eight week to labor.[94]

These phases refer to the different developmental stages of a baby. In brief, the main characteristics of these developmental stages are as follows:



In Surat az-Zumar 6, it is pointed out that man is created in the mother's womb in three distinct regions. Indeed, modern embryology has revealed that the baby's embryological development takes place in three distinct regions in the mother's womb.

- Pre-embryonic Stage

In this first phase, the zygote grows by division, and when it becomes a cell cluster, it buries itself in the wall of the uterus. While they continue growing, the cells organize themselves in three layers.

- Embryonic Stage

The second phase lasts for five and a half weeks, during which the baby is referred to as an "embryo." During this stage, the basic organs and systems of the body start to appear from the cell layers.

- **Foetal Stage**

From this stage onward, the embryo is called a "foetus." This phase begins at the eighth week of gestation, and lasts until the moment of birth. The distinctive characteristic of this stage is that the foetus looks much like a human being, with its face, hands and feet. Although it is only 3 cm (1.18 inch) long initially, all of its organs have become apparent. This phase lasts for about 30 weeks, and development continues until the week of delivery.

Information on the development in the mother's womb became available only after observations with modern devices. Yet, just like many other scientific facts, in a miraculous way, Allah draws our attention to these items of information in the verses of the Qur'an. The fact that such detailed and accurate information was given in the Qur'an at a time when people had scarce information on medical matters is clear evidence that the Qur'an is the word of Allah. (See Harun Yahya, *The Miracle of Human Creation*, Goodword Books, New Delhi, 2003)



THE CREATION OF HUMAN BEINGS FROM WATER

***Allah created every [living] creature from water.* Some of them go on their bellies, some of them on two legs, and some on four. Allah creates whatever He wills. Allah has power over all things. (Qur'an, 24:45)**

Do those who disbelieve not see that the heavens and the Earth were sewn together and then We unstitched them and that *We made from water every living thing*? So won't they believe? (Qur'an, 21:30)

And it is He Who *created human beings from water* and then gave them relations by blood and marriage. Your Lord is All-Powerful. (Qur'an, 25:54)

When we look at the verses concerned with the creation of human beings and living things, we clearly see evidence of a miracle. One such miracle is of the creation of living things from water. It was only possible for people to come by that information, clearly expressed in those verses, hundreds of years afterwards with the invention of the microscope.

The words "Water is the main component of organic matter. 50-90% of the weight of living things consists of water" appear regularly in encyclopaedias. Furthermore, 80% of the cytoplasm (basic cell material) of a standard animal cell is described as water in biology textbooks. The analysis of cytoplasm and its appearance in textbooks took place hundreds of years after the revelation of the Qur'an. It is therefore impossible for this fact, now accepted by the scientific community, to have been known at the time the Qur'an was revealed. Yet, attention was drawn to it in the Qur'an 1,400 years before its discovery.

All life forms need water in order to survive. Animals in dry regions, therefore, have been created with mechanisms to protect their metabolisms from water loss and to ensure maximum benefit from water use. If water loss takes place in the body for any reason, and if that loss is not made good, death will result in a few days. The famous 17th century scientist Jan Baptista van Helmont discovered in 1640s that water in the soil was the most important element of plant development.

CREATION FROM CLAY

In the Qur'an, Allah reveals that the creation of the human is a miracle. The first human being was created by Allah shaping clay into human form and breathing a soul into it:

Your Lord said to the angels, "*I am going to create a human being out of clay*. When I have formed him and breathed My Spirit into him, fall down in prostration to him!" (Qur'an, 38:71-72)

Then inquire of them: Is it they who are stronger in structure or other things We have created? *We created them from sticky clay*. (Qur'an, 37:11)

When the human body is examined today, it may be discovered that many elements present on the earth are also to be found in the body. Living tissues contain 95% carbon, hydrogen, oxygen, nitrogen, phosphorus and sulphur, with a total of 26 different elements.[95] In another verse of the Qur'an we are told:

We created man from an extract of clay. (Qur'an, 23:12)

The Arabic word "*sulaalah*," translated as "extract" in the verse, means "representative example, essence." As we have seen, the information revealed in the Qur'an 1,400 years ago confirms what modern science tells us-the fact that the same elements are employed in human creation as those found in the soil.

Below is a diagram showing the distribution of the elements in a 70-kilo (140 pound) human being.

Element	Symbol	Main Function	%	Weight
Macro-minerals				**Gram**
Oxygen	O	Respiration of cells/tissues, a component of water	65.0	43,000
Carbon	C	Organic structure	18.5	12,000
Hydrogen	H	Component of water/tissue	9.5	6,300
Nitrogen	N	Component of protein/tissue	3.3	2,000
Calcium	Ca	Bones and teeth	1.5	1,100
Phosphorus	P	Bones and teeth	1.0	750
Potassium	K	Intracellular electrolyte	0.35	225
Sulfur	S	Amino acids (hair and skin)	0.25	150
Chlorine	Cl	An electrolyte when in the form of chloride	0.15	100
Sodium	Na	Intracellular electrolyte	0.15	90
Magnesium	Mg	Electrolyte of metabolism	0.05	35
Silicon	Si	Connective tissue/bone	0.05	30
Micro-minerals			**%**	**Milligram**
Iron	Fe	Carrier of hemoglobin/oxygen	0.01	4,200
Zinc	Zn	Content of enyzme/DNA synthesis, immunity support	0.01	2,400
Copper	Cu	Enzyme cofactor	0.01	90
Boron	B	Bone structure	0.01	68
Cobalt	Co	Essence of B12 vitamin	0.01	20
Vanadium	V	Fat metabolism	0.01	20
Iodine	I	Thyroid hormone	0.01	15
Selenium	Se	Enzyme, antioxidant, immunity support	0.01	15
Manganese	Mn	Metallic enzymes	0.01	13
Molybdenum	Mo	Enzyme cofactor	0.01	8
Chromium	Cr	Glucose-tolerant facto	0.01	6

THE PROGRAMMING IN GENES

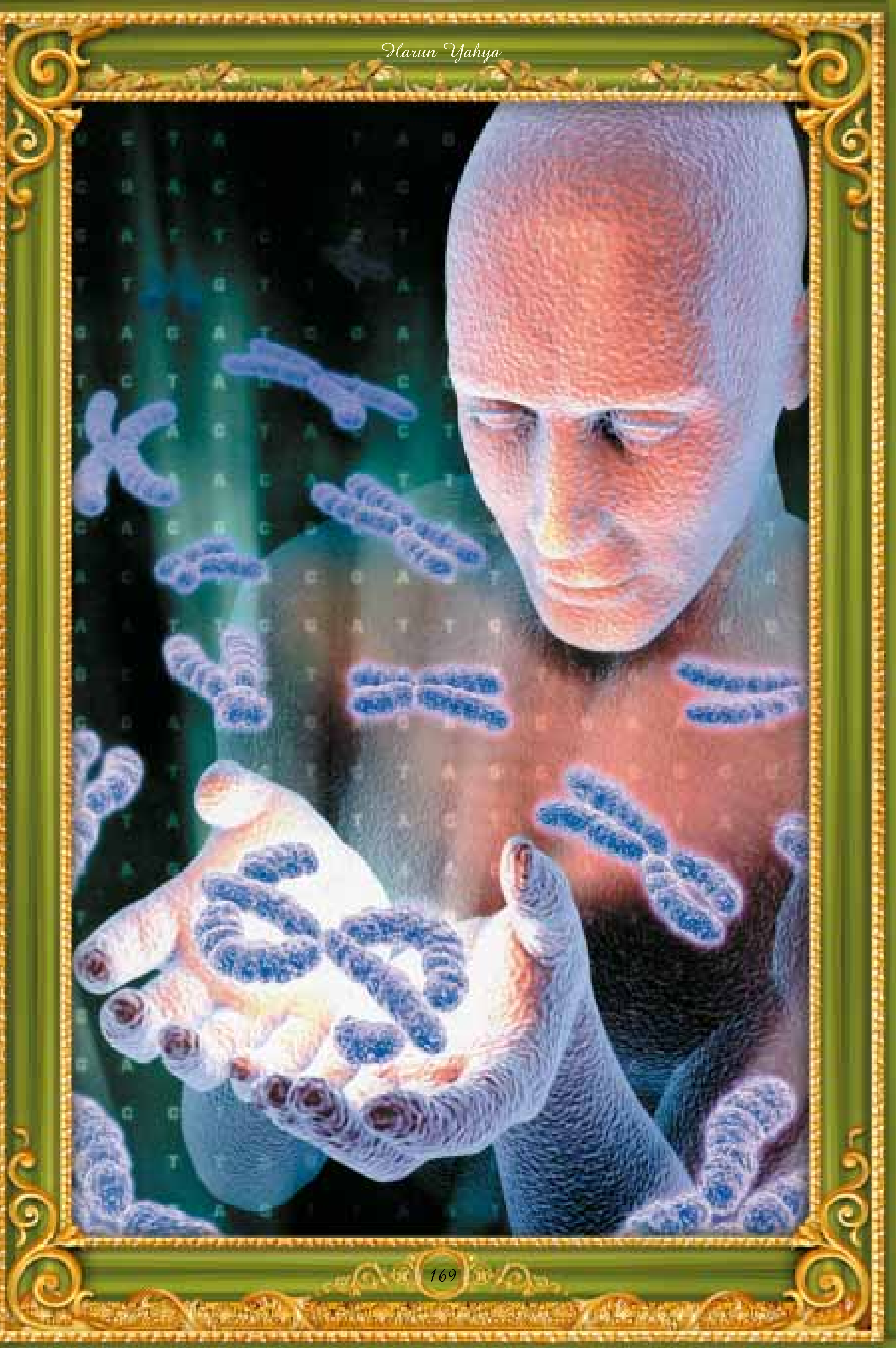
From what thing did He create him? ***From a drop of sperm He created him and proportioned him.*** **Then He eases the way for him. (Qur'an, 80:18-20)**

The word "*qaddara*," translated as "**proportioned**" in the above verse, comes from the Arabic verb "*qadara*." It translates as "arranging, setting out, planning, programming, seeing the future, the writing of everything in destiny (by Allah)."

When the father's sperm cell fertilises the mother's egg, the parents' genes combine to determine all of the baby's physical characteristics. Each one of these thousands of genes has a specific function. It is the genes which determine the colour of the eyes and hair, height, facial features, skeletal shape and the countless details in the internal organs, brain, nerves and muscles. In addition to all the physical characteristics, thousands of different processes taking place in the cells and body-and indeed the control of the whole system-are recorded in the genes. For example, whether a person's blood pressure is generally high, low or normal depends on the information in his or her genes.

The first cell which forms when the sperm and the egg are joined also forms the first copy of the DNA molecule which will carry the code in every cell of the person's body, right up until death. DNA is a molecule of considerable size. It is carefully protected within the nucleus of the cell and this molecule is an information bank of the human body as it contains the genes we mentioned above. The first cell, the fertilised egg, then divides and multiplies in the light of the program recorded in the DNA. The tissues and organs begin to form: This is the beginning of a human being. The coordination of this complex structuring is brought about by the DNA molecule. This is a molecule consisting of atoms such as carbon, phosphorus, nitrogen, hydrogen and oxygen.

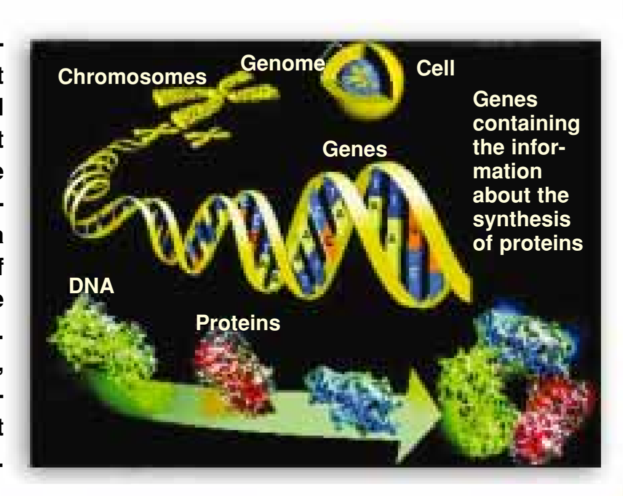
The information capacity recorded in DNA is of a size which



astonishes scientists. There is enough information in a single human DNA molecule to fill a million encyclopaedia pages or 1,000 volumes. To put it another way, the nucleus of a cell contains information, equivalent to that in a 1 million-page encyclopaedia. It serves to control all the functions of the human body. To make a comparison, the 23-volume *Encyclopaedia Britannica*, one of the largest encyclopaedias in the world, contains a total of 25,000 pages. Yet a single molecule in the nucleus of a cell, and which is so much smaller than that cell, contains a store of information 40 times larger than the world's largest encyclopaedias. That means that what we have here is a 1,000-volume encyclopaedia, the like of which exists nowhere else on Earth. This is a miracle of design and creation within our very own bodies, for which evolutionists and materialists have no answer.

Bearing in mind that the structure of DNA was unravelled by Francis Crick in 1953, it is truly amazing that the Qur'an pointed to the concept of "genetic planning" in an age when, as we have mentioned previously, mankind's knowledge was very limited. Geneticists were unable to discuss until the end of the 19th century and these remarkable facts act again as proofs that the Qur'an is the word of Allah. (See Harun Yahya, *The Miracle of Creation in DNA*, Goodword Books, New Delhi, 2002)

The DNA molecule consists of 4 different nucleotides one behind the other in different sequences. The sequences of these molecules constitute the data regarding the structure of all the proteins to be used by living things. Proteins use these data, either alone or in complex forms, to carry out many cellular activities.



THE MENSTRUAL PERIOD

The menstrual period is when the unfertilised egg is expelled from the body. Since fertilisation has not taken place, the walls of the previously readied womb contract and the egg is expelled with the breaking of tiny blood vessels. Following that, the body will then begin preparations to repeat the whole process all over again.

All of these stages are repeated in all women over a specific period. Every month, new egg cells form, the same hormones are secreted-again and again at the same times. Thus the female body is prepared as if it will be fertilised. However, in the final stage, the absence or presence of the sperm changes the nature of the preparations in the body.

During the period in question, the changes in the empty space in the womb can only be identified by an anatomical or gynaecological examination. Yet these changes, only recently identified by scientists, are miraculously indicated in Surat ar-Ra‘d:

> **Allah knows what every female bears and** ***every shrinking of the womb and every swelling.*** **Everything has its measure with Him. (Qur'an, 13:8)**

At the beginning of the menstrual period, the mucous on the walls of the womb (the endometrium layer) is 0.5 mm (0.02 inch) thick. Under the effect of hormones secreted by the egg, this layer grows and reaches a thickness of 5-6 mm (0.2 inch). This layer is then discarded in the absence of fertilisation. As we see from the above verse, this monthly increase and reduction in the walls of the womb is indicated in the Qur'an.

PREGNANCY AND BIRTH

Curse man for his ingratitude! From what thing did He create him? From a drop of sperm He created him and proportioned him. Then *He eases the way for him.* (Qur'an, 80:17-20)

The foetus is fully formed at the end of the sixth month. The womb then enters the incubation period. All the baby's bodily organs and systems develop fully during that time, and the womb accelerates this growth by providing nourishment for the foetus. This period continues until the baby emerges from the mother's womb.

The birth canal is normally very narrow and it is difficult for the foetus to pass through it. During birth, however, a number of physiological changes take place in the mother's body. These changes allow the foetus to move easily through the birth canal. Some of these changes include: the expansion of the joints in the pelvic bones in order to widen the birth canal, the relaxation of the muscles to further widen the canal and the lubrication of the canal with amniotic fluid.[96] These pre-birth changes are described in one scientific source in these terms:

> As birth approaches, the amniotic fluid embarks on those activities that will be necessary to facilitate that birth. This fluid comprises sacs, which will enlarge the mouth of the womb, thus allowing the womb to assume the dimensions to allow the baby to pass. These sacs also prevent the foetus from being crushed in the womb during birth. Furthermore, when the sacs burst and release their fluid at the commencement of birth, the path to be taken by the foetus is both lubricated and sterilised. In this way, birth takes place easier and in a manner naturally free of germs.[97]

This series of occurrences is openly indicated in the verse of the Qur'an, "**Then He eases the way for him.**" (Qur'an, 80:20) However, it has been possible today to determine these physiological changes-which Allah informed us of 1,400 years ago-only with the use of a number of technological devices.

THE SEQUENCE IN DEVELOPMENT OF HUMAN ORGANS

It is *He Who has created hearing, sight and minds* for you. What little thanks you show! (Qur'an, 23:78)

Allah brought you out of your mothers' wombs knowing nothing at all, and *gave you hearing, sight and minds* so that perhaps you would show thanks. (Qur'an, 16:78)

Say: "What do you think? *If Allah took away your hearing and your sight and sealed up your hearts,* what deity is there, other than Allah, who could give them back to you?"… (Qur'an, 6:46)

We created man from a mingled drop to test him, and *We made him hearing and seeing*. (Qur'an, 76:2)

The above verses refer to a number of senses given to human beings by Allah. These are always referred in a specific order in the Qur'an: hearing, sight, feeling and understanding.

In a paper published in the *Journal of the Islamic Medical Association*, Dr. Keith Moore states that during the development of the foetus, the eye begins to form after the inner ear has assumed its first form. He says the brain, the centre of feeling and understanding, begins its development after the ear and the eye.[98]

The foetus' ears begin to develop as early as the twenty-second day of pregnancy and become fully functional in the fourth month. After that, the foetus can hear sounds in its mother's womb. For that reason, the sense of hearing forms before the other vital functions for a new-born baby. The order set out in the Qur'an is striking from that point of view. (See Harun Yahya, *The Miracle of Human Creation*, Goodword Books, New Delhi, 2003)

THE FORMATION OF MILK

There is instruction for you in cattle. From the contents of their bellies, from between the dung and blood, We give you pure milk to drink, easy for drinkers to swallow. (Qur'an, 16:66)

The basic materials which allow the nourishment of the body come about as a result of chemical changes in the digestive system. These digested substances then pass through the wall of the intestine into the blood stream. Due to the circulation of the blood, the nutriments reach the relevant organs.

Like the other bodily tissues, the milk glands are nourished by nutriments brought to them by the blood. The blood therefore plays a most important role in the collection of nutriments from foodstuffs. Milk is secreted by the milk glands after all these stages and its nutritional values are particularly high.

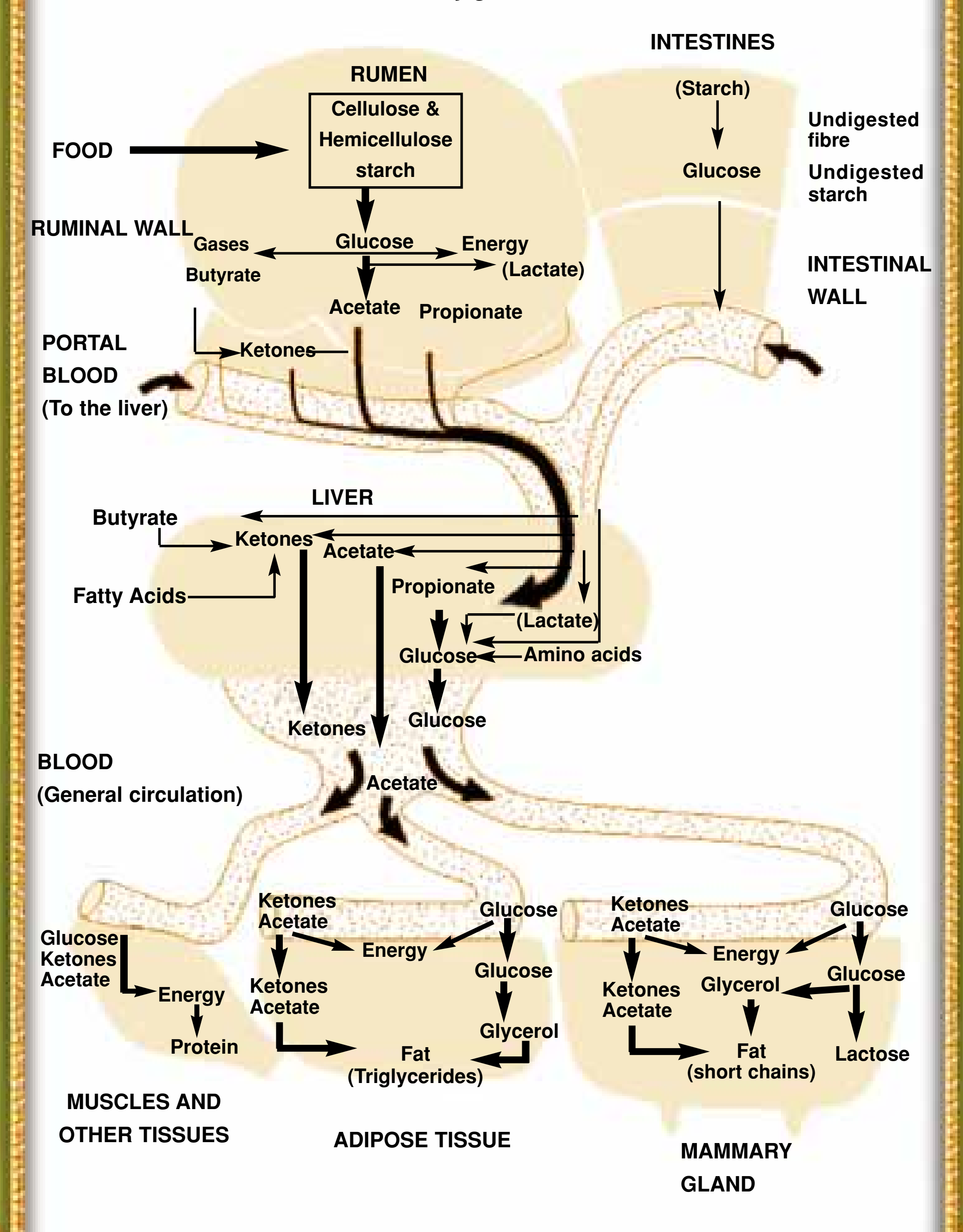
Human beings are unable to directly consume either the half-digested food in an animal's stomach or an animal's blood. Furthermore, the direct consumption of these or any of their compounds can lead to severe illness, and even death. Thanks to the exceedingly complex biological systems He has created, Allah provides clean and healthy food for human beings from these fluids.

This is because it forms as a result of digested food being carried by the blood. High-nutrition milk is thus produced from blood, which cannot be consumed directly, and semi-digested food.

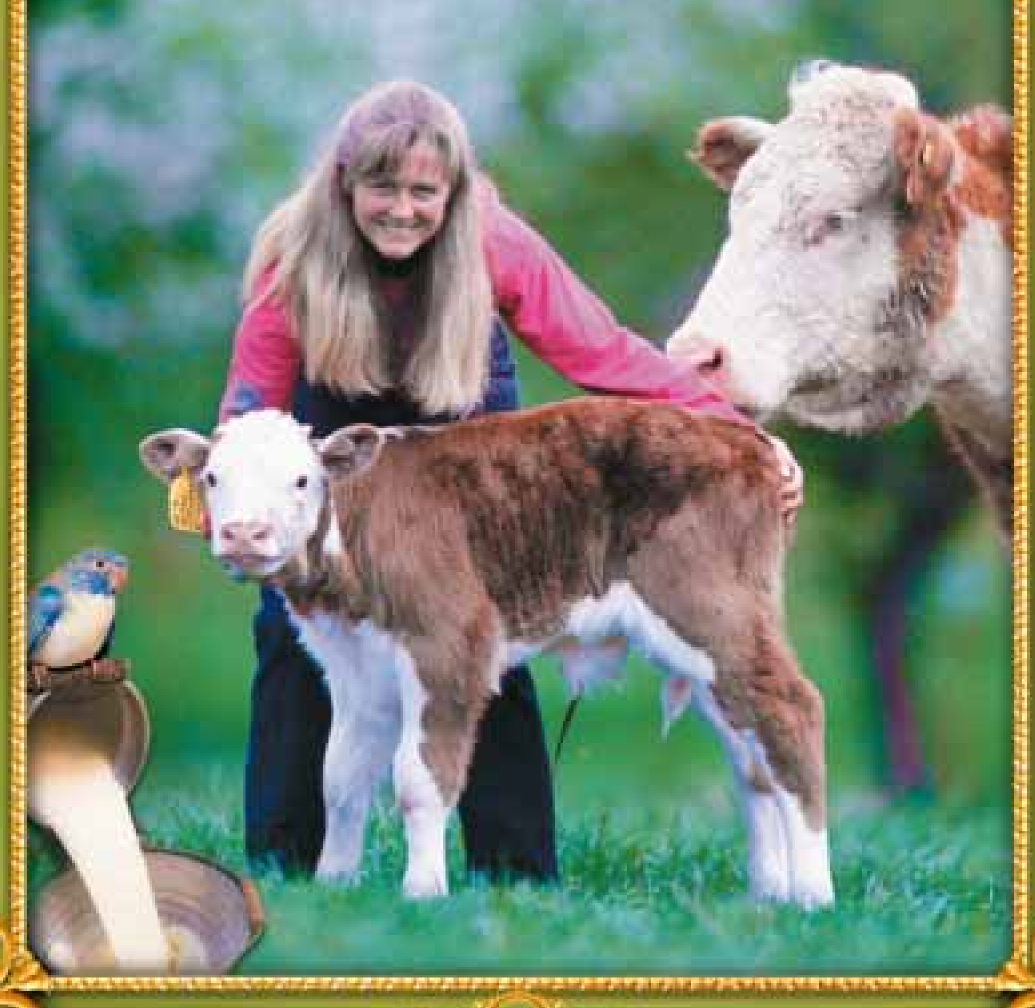
The formation of milk is by itself an enormous miracle of creation. And it is another miracle altogether that such detailed information about that formation should be contained in the Qur'an.

As we have seen, the information about the biological formation of milk in Surat an-Nahl 66, is in great accordance with the facts established by modern science. It is quite clear that such information, requiring detailed knowledge of mammals' digestive systems, could not have been known at the time when the Qur'an was revealed.

In the table below, it can be seen the distribution to the body of semi-digested food from the alimentary canal combined with blood from the veins. While some of this mixture is distributed to muscles and other body tissues, some is delivered to mammary glands to be secreted as milk.



Say: "Who provides for you from the heavens and Earth?" Say: "Allah. It is certain that one or the other of us, either we or you, is following guidance or else clearly astray."
(Qur'an, 34:24)



THE MIRACULOUS MIXTURE: A MOTHER'S MILK

And We have enjoined upon man goodness towards his parents: His mother bore him by bearing strain upon strain, and *his weaning was in two years*: "[Hence, O man,] be grateful to Me and to your parents; to Me is the eventual coming." (Qur'an, 31:14)

Mother's milk is a matchless compound created by Allah to meet the baby's nutritional needs and protect it against possible infections. The balance of the nutriments in mother's milk is at ideal levels and the milk is in the ideal form for the baby's immature body. At the same time, the mother's milk is also very rich in nutrients which accelerate the growth of brain cells and the development of the nervous system.[99] Artificial baby foods prepared with present-day technology cannot replace this miraculous food.

The list of advantages to the baby provided by mother's milk is being added to every day. Research has shown that babies who are fed mother's milk are particularly protected against infections concerning the respiratory and digestive systems. That is because the antibodies in mother's milk provide a direct defence against infection. Other anti-infection properties of mother's milk are that it provides a hospitable environment for "good" bacteria called "normal flora" thus constituting a barrier to harmful bacteria, viruses and parasites. Furthermore, it has also been established that there are factors in mother's milk which arrange the immune system against infectious diseases and allow it to function properly.[100]

Since the mother's milk has been specially designed, it is the most easily digestible food for babies. Despite being nutritionally very rich, it is easily digested by the baby's sensitive digestive system. Since the baby thus expends less energy on digestion, it is able to use that energy for other bodily functions, growth and organ development.

The milk of mothers who have had premature babies contains higher levels of fat, protein, sodium, chloride and iron to meet the baby's needs. Indeed, it has been established that the functions of the eye develop better in premature babies fed on mother's milk and that they perform better in intelligence tests. In addition, they also have a great many other advantages.

One of the ways in which mother's milk is important to the development of the new-born baby is the fact that it contains omega-3 oil alpha linoleic acids. As well as being an important compound for the human brain and retina, it is also of great importance from the point of view of new-born babies. Omega-3 is of particular importance throughout pregnancy and the early stages of babyhood if the brain and nerves are to develop normally. Scientists particularly emphasise the importance of mother's milk as a natural and perfect store of omega-3.[101]

Furthermore, research by Bristol University scientists revealed that among the long-term benefits of mother's milk are its positive effect on blood pressure, thanks to which the risk of heart attack is

reduced. The research team concluded that the protective nature of mother's milk stems from its nutritional content. According to the results of the research, published in the medical journal *Circulation*, babies fed on mother's milk are less likely to develop heart disease. It has been revealed that the presence in mother's milk of long-chain polyunsaturated fatty acids-these prevent hardening of the arteries-along with the fact that babies fed on mother's milk consume less sodium-this is closely linked to blood pressure-and do not, as a result, gain excessive amounts of weight are among the ways that mother's milk benefits the heart.[102]

In addition, a team led by Dr. Lisa Martin, of the Cincinnati Children's Hospital Medical Centre in the USA, found high levels of the protein hormone known as adiponectin in mother's milk.[103] High blood levels of adiponectin are associated with a reduced risk of heart attack. Low levels of adiponectin are found in people who are obese and who are at increased risk of a heart attack. It was therefore established that the risk of obesity in babies fed on mother's milk declined in relation to this hormone. Furthermore, they also discovered the presence of another hormone called leptin in the mother's milk which has a central role in fat metabolism. Leptin is believed to be a signal to the brain that there is fat on the body. According to Dr. Martin's announcement, therefore, these hormones absorbed in babyhood through mother's milk reduce the risk of such illnesses as obesity, type 2 diabetes and insulin resistance, and coronary artery disease.[104]

Facts about "The Freshest Food"

The facts about the mother's milk are not restricted to these. The contribution it makes to the baby's health alters according to the phases the baby undergoes and whichever foodstuff is required at a particular stage, the contents of the milk change to meet those very specific needs. Mother's milk, ready at all times and at the ideal temperature, plays a major role in brain development because of the sugar and fat it

contains. In addition, elements such as calcium in it play a large role in the development of the baby's bones.

Although it is called milk, this miraculous compound actually consists mostly of water. This is a most important feature because in addition to food, babies also need liquid in the form of water. Full hygiene may not be established in water or foodstuffs other than mother's milk. Yet mother's milk-90% water no less-meets the baby's water needs in the most hygienic manner.

Mother's Milk and Intelligence

Scientific research shows that the cognitive development in breast-fed babies is greater than that in other babies. A comparative analysis of breast-fed babies and formula-fed babies by James W. Anderson-an expert from the University of Kentucky-established that the IQs of babies fed on mother's milk were 5 points higher than those of other babies. As a result of this study, it was determined that intelligence is benefited by mother's milk for up to 6 months and that children who are breast-fed for less than 8 weeks show no IQ benefit.[105]

Does Mother's Milk Combat Cancer?

As a result of all the research performed, it is proven that mother's milk, on which hundreds of papers have been published, protects babies against cancer. This, despite the fact that the mechanism is not yet fully understood. When a protein from the mother's milk killed off tumour cells which had been grown in laboratories without damaging any healthy cells, researchers stated that a great potential has emerged. Catharina Svanborg, professor of clinical immunology at Lund University in Sweden, headed the research team that discovered these

miraculous secrets of mother's milk.[106] This team at Lund University have described the way that mother's milk provides protection against many forms of cancer as a miraculous discovery.

Initially, researchers treated intestinal mucous cells taken from new-born babies with mother's milk. They observed that the disorder caused by the bacterium *Pneumococcus* and known as pneumonia was efficiently halted by mother's milk. What is more, babies fed on mother's milk encounter far fewer hearing difficulties than those fed on formula and suffer far fewer respiratory infections. After a series of studies, it was shown that mother's milk also provides protection against cancer. After showing that the incidence of the lymph cancer observed in childhood was nine times greater in formula-fed children, they realised that the same results applied to other forms of cancer. According to the results, mother's milk accurately locates the cancer cells and later destroys them. It is a substance called alpha-lac (alpha-lactalbumin), present in large quantities in mother's milk, that locates and kills the cancer cells. Alpha-lac is produced by a protein that assists in the manufacture of the sugar lactose in the milk.[107]

This Matchless Blessing Is A Gift from Allah

Another miraculous feature of mother's milk is the fact that it is exceedingly beneficial for the baby to be fed with it for two years.[108] This important information, only recently discovered by science, was revealed by Allah fourteen centuries ago in the verse: "**Mothers should nurse their children for two full years-those who wish to complete the full term of nursing...**" (Qur'an, 2:233)

In the same way that the mother does not decide to produce milk, the most ideal source of nourishment for the helpless baby in need of feeding in her body, neither does she decide on the various nutritional levels within it. It is Almighty Allah, Who knows the needs of and displays mercy to every living thing, Who creates mother's milk for the baby in the mother's body.

THE IDENTITY HIDDEN IN THE FINGERPRINT

While it is stated in the Qur'an that it is easy for Allah to bring man back to life after death, peoples' fingerprints are particularly emphasized:

Yes, We are able to put together in perfect order *the very tips of his fingers*. (Qur'an, 75:4)

The emphasis on fingerprints has a very special meaning. This is because shapes and details on everyone's fingerprint are unique to each individual. Every person who is alive or who has ever lived in this world has a set of unique fingerprints. Furthermore, even identical twins having the very same DNA sequence have their own set of fingerprints.[109]

Fingerprints attain their final shape before birth and remain the same for a lifetime unless a permanent scar appears. That is why fingerprints are accepted as a very important proof of identity, exclusive to their owner. The science of fingerprints has been used as a non-erring identity determination method.



Everyone, including identical twins, has a unique fingerprint. In other words, people's identities are coded at their fingertips. This coding system may also be compared to the barcode system that is used today.

However, what is important is that this feature of fingerprints was only discovered in the late 19th century. Before then, people regarded fingerprints as ordinary curves without any specific importance or meaning. However in the Qur'an, Allah points to the fingertips, which did not attract anyone's attention at that time, and calls our attention to their importance. This importance has only been fully understood in our day.





The validity of the technique to establish identity by means of fingerprints (AFS-Applicant Fingerprint System) has been confirmed by various police organisations over the last 25 years and is a legally approved method. No technology of identity verification in our time gives such effective results as fingerprints. Using fingerprints to establish identity has been used in legal processes for the last 100 years and possesses international acceptance. ("What is a Fingerprint?," www.ridgesandfurrows.homestead.com/fingerprint.html.)

In his book *Fingerprint Techniques* Andre A. Moenssens analyses the way that each individual has a unique set of fingerprints: *"... no two fingerprints from different digits have ever been found to match exactly."* (Andre A. Moenssens, "Is Fingerprint Identification a 'Science'?," www.forensic-evidence.com/site/ID/ID00004_2.html#ID1.)

THE FEMALE HONEY BEE

Your Lord revealed to the bees: "*Build* dwellings in the mountains and the trees, and also in the structures which men erect. Then *eat* from every kind of fruit and *travel* the paths of your Lord, which have been made easy for you to follow." From inside them comes a drink of varying colours, containing healing for humanity. There is certainly a sign in that for people who reflect. (Qur'an, 16:68-69)

In the honey bee colonies where each of the many bees is assigned a specific task, the only exception is the male honey bee. The males do not contribute to the defence of the hive or its cleaning, to gathering food, or making of the honeycomb and honey. The only function of the male bees in the hive is to inseminate the queen bee.[110] Apart from reproductive organs, the males possess almost none of the features possessed by the other bees and it is therefore impossible for them to do anything but fertilise the queen.

The worker bees carry the entire load of the colony. Although they are females like the queen, their ovaries have no maturity. This renders them sterile. They have several duties: cleaning the hive, maintaining the larvae and the young, feeding the queen bee and the males, producing honey, constructing the honeycomb and repairing it, ventilating the hive and safeguarding it, gathering supplies like nectar, pollen, water and resin, and storing these in the hive.

In Arabic, there are two different usages of verbs. By means of the usage, it is possible to determine whether the subject is a female or a male. As a matter of fact, the verbs (italic words) used for the honey bee in the verses are used in the format of the verb for females. Through this, the Qur'an indicates that the honey bees that work in the making of the honey are females.[111]

We should not forget that it is impossible for this fact to have been known about the honey bees in the time of the Prophet Muhammad

(saas). Yet, Allah has pointed at this fact and shown us yet another miracle of the Qur'an.



THE MIRACLE OF HONEY

Your Lord revealed to the bees: "Build dwellings in the mountains and the trees, and also in the structures which men erect. Then eat from every kind of fruit and travel the paths of your Lord, which have been made easy for you to follow." ***From inside them comes a drink of varying colours, containing healing for humanity.*** **There is certainly a sign in that for people who reflect. (Qur'an, 16:68-69)**

Honey is a "healing for men" as stated in the verses above. Nowadays, apiculture and bee products have opened a new branch of research in scientifically advanced parts of the world. Other benefits of honey may be described as below:

Easily digested: Because sugar molecules in honey can convert into other sugars (e.g. fructose to glucose), honey is easily digested by the most sensitive stomachs, despite its high acid content. It helps kidneys and intestines to function better.

Rapidly diffuses through the blood; is a quick energy source: When accompanied by mild water, honey diffuses into the bloodstream in seven minutes. Its free sugar molecules make the brain function better since the brain is the largest consumer of sugar. Honey is a natural composition of sugars like glucose and fructose. According to recent research, this unique mixture of sugars is the most effective means to remove fatigue and increase athletic performance.

Supports blood formation: Honey provides an important part of the energy needed by the body for blood formation. In addition, it helps in cleansing the blood. It has some positive effects in regulating and facilitating blood circulation. It also functions as a protection against capillary problems and arteriosclerosis.

Does not accommodate bacteria: This bactericide (bacteria-killing) property of honey is named "the inhibition effect." There are various reasons of this anti-microbial property of the honey. Some examples

are: the high sugar content that limit the amount of water microorganisms need for growth, its high acidity (low pH) and composition which deprive bacteria from nitrogen necessary for reproduction. The existence of hydrogen peroxide as well as antioxidants in the honey prevents bacteria growth.

Antioxidant: Everyone who wants to live a healthier life should consume antioxidants. Those are the components in cells that get rid of harmful byproducts of normal metabolic functions. These elements inhibit destructive chemical reactions that cause spoilage of food and many chronic illnesses. Researchers believe food products rich in antioxidants may prevent heart problems and cancer. Strong antioxidants are present in honey content: *Pinocembrin*, *pinobaxin*, *chrisin* and *galagin*. *Pinocembrin* is an antioxidant that merely exists in the honey.[112]

Vitamin and mineral depot: Honey is composed of sugars like glucose and fructose and minerals like magnesium, potassium, calcium, sodium chlorine, sulphur, iron and phosphate. It contains vitamins B1, B2, C, B6, B5 and B3 all of which change

The antibacterial and anti-inflammatory properties of honey were revealed as a result of clinical observations and research. Honey is exceedingly effective in painlessly cleaning up infection and dead cells in these regions and in the development of new tissues. The use of honey as a medicine is mentioned in the most ancient writings. In the present day, doctors and scientists are rediscovering the effectiveness of honey in the treatment of wounds.
Dr. Peter Molan, a leading researcher into honey for the last 20 years and a professor of biochemistry at New Zealand's University of Waikato, says this about the antimicrobial properties of honey:
"Randomized trials have shown that honey is more effective in controlling infection in burn wounds than silver sulphadiazine, the antibacterial ointment most widely used on burns in hospitals."
("Honey Against Infected Skin Lesions," www.apitherapy.com/honeysk.htm.)

according to the qualities of the nectar and pollen. Besides the above, copper, iodine, and zinc are also present, albeit in small quantities.

Honey is used in healing wounds:

- When used in treatment of wounds, thanks to its ability to absorb moisture from the air, honey facilitates healing process and prevents scarring. This is because honey stimulates the growth of epithelial cells that form the new skin cover over a healed wound. In this way, even in case of large wounds, honey may eliminate the need for tissue transplantation.

- Honey stimulates the regrowth of tissue involved in the healing process. It stimulates the formation of new blood capillaries and the growth of fibroblasts that replace the connective tissue of the deeper layer of the skin and produce the collagen fibres that give strength to the repair.

- Honey has an anti-inflammatory action, which reduces the swelling around a wound. This improves circulation and thus hastens the healing process. It also reduces pain.

- Honey does not stick to the underlying wound tissues, so there is no tearing away of newly formed tissue, and no pain, when dressings are changed.

- It is used with great success as a dressing on patients with wounds or ulcers resulting from radiation therapy.[113]

- Thanks to its aforementioned antimicrobial property, honey provides a protective barrier to prevent wounds becoming infected. It also rapidly clears any existing infection from wounds. It is fully effective, even with antibiotic-resistant strains of bacteria. Unlike antiseptics and antibiotics, there is no impairment of the healing process through adverse effects on wound tissues.[114]

It can easily be seen from this information that honey has great "healing" properties. This is undoubtedly one of the miracles of the Qur'an Allah, Who is Exalted in Power, has revealed. An analysis of the nutritional value of honey can be seen in the table to the side:

The "First World Wound Healing Congress," held in Melbourne on September 10-13, 2000, discussed the use of honey in wound treatment. The comments made during the congress were along these lines:

Many natural antibacterial substances are being evaluated to find a treatment for wounds infected with bacteria with multiple resistance to antibiotics, the "superbugs," as this becomes a major clinical problem. But most of these natural substances have no proven effectiveness on infected wounds, nor is it known if they have any adverse effects on wound tissues. Honey is different, as it has an excellent "track record" over 4,000 years of usage as a wound dressing... Honey has a potent antibacterial activity and is very effective in clearing infection in wounds and protecting wounds from becoming infected. (bio.waikato.ac.nz/pdfs/honeyresearch/potential.pdf)

Nutritional Values	**Average amount in a portion**	**Average amount in 100 g**
Water	3.6 gr	17.1 gr
Total carbohydrates	17.3 gr	82.4 gr
Fructose	8.1 gr	38.5 gr
Glucose	6.5 gr	31.0 gr
Maltose	1.5 gr	7.2 gr
Sucrose	0.3 gr	1.5 gr
Nutritional Contents		
Total calories (kilocalories)	64	304
Total calories (kilocalories) (as fat)	0	0
Total fat	0	0
Saturated fat	0	0
Cholesterol	0	0
Sodium	0.6 mg	2.85 mg
Total carbohydrate	17 gr	81 gr
Sugar	16 gr	76 gr
Diet fibres	0	0
Protein	0.15 mg	0.7 mg
Vitamins		
B1 (Thiamine)	< 0.002 mg	< 0.01 mg
B2 (Riboflavin)	< 0.06 mg	< 0.3 mg
Nicotinic acid	< 0.06 mg	< 0.3 mg
Pantothenic acid	< 0.05 mg	< 0.25 mg
Vitamin B6	< 0.005 mg	< 0.02 mg
Folic acid	< 0.002 mg	< 0.01 mg
Vitamin C	0.1 mg	< 0.5 mg
Minerals		
Calcium	1.0 mg	4.8 mg
Iron	0.05 mg	0.25 mg
Zinc	0.03 mg	0.15 mg
Potassium	11.0 mg	50.0 mg
Phosphorus	1.0 mg	5.0 mg
Magnesium	0.4 mg	2.0 mg
Selenium	0.002 mg	0.01 mg
Copper	0.01 mg	0.05 mg
Chromium	0.005 mg	0.02 mg
Manganese	0.03 mg	0.15 mg
ASH	0.04 mg	0.2 gr

THE DATE AND ITS USES AS DESCRIBED IN THE QUR'AN

In a number of Qur'anic verses, the humble date is honoured as one of the blessings of Paradise. (Qur'an, 55:68) When this fruit is examined, it can be seen to have a great many important features. One of the oldest known species of plant, the date is today a food of preference not only for its delicious taste but also for its nutritious properties. New benefits imparted by the date are being discovered every day and has come to be used as a medicine as well as a food. These features of the date are noted in Surah Maryam:

> ***The pains of labour drove her to the trunk of a date-palm.* She [Maryam] said, "Oh if only I had died before this time and was something discarded and forgotten!" A voice called out to her from under her, "Do not grieve! Your Lord has placed a small stream at your feet. *Shake the trunk of the palm towards you and fresh, ripe dates will drop down onto you. Eat and drink and delight your eyes…*" (Qur'an, 19:23-26)**

There is considerable wisdom in the way that Allah recommends Maryam to eat this fruit. The date is an excellent choice of food for the pregnant women and for those who have just given birth. This is a widely accepted scientific fact. Maryam was inspired to understand this point, in order to make her own labour easier. The date has one of the highest sugar levels, 60-65%, of all fruits. Doctors recommend that pregnant women be given foods containing fruit sugar on the day they give birth. The aim behind this is to energise and revitalise the mother's weakened body and at the same time to stimulate the milk hormones and increase the levels of mother's milk essential to the new-born baby.

In addition, loss of blood during birth leads to a fall in body sugar levels. Dates are important from the point of view of enabling sugar to enter the body and prevent blood pressure from dropping. Their high calorific value strengthens people weakened by illness or suffering from extreme fatigue.

These facts reveal the wisdom in the way that Allah recommended Maryam to eat dates, designed to energise and invigorate the woman and ensure the emergence of milk, the only food for a baby. For example, the date contains more than ten elements of vital importance if the body is to remain healthy and energetic. Modern-day scientists state that human beings can actually live for years on nothing more than dates and water.[115] V. H. W. Dowson, a recognised expert in this field, says that one grain of date and a glass of milk are enough to meet all of a person's daily nutritional requirements.[116]

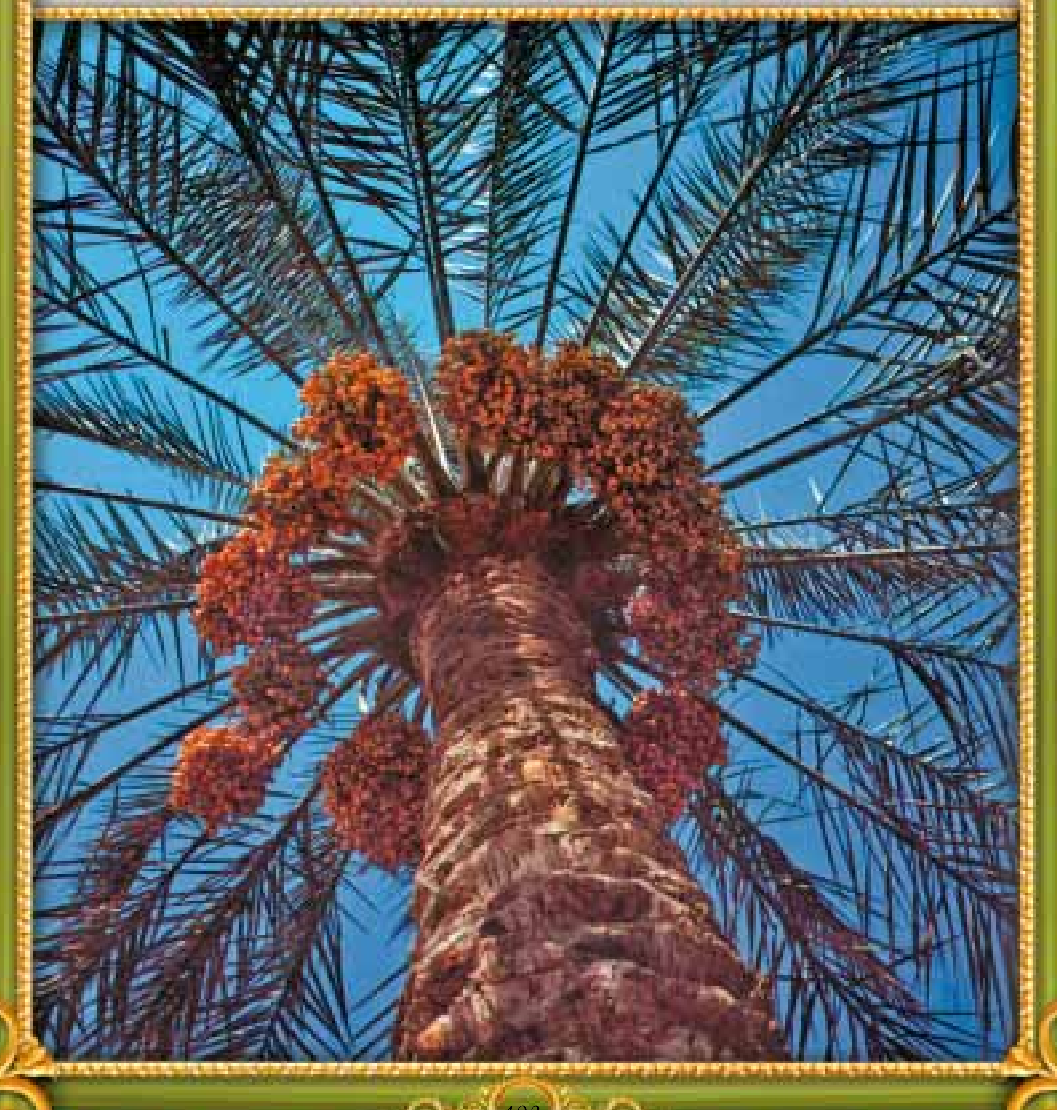
The substance oxytocin, which is present in the date, is used in modern medicine to facilitate birth. In fact, oxytocin means "rapid birth." It is also known to increase levels of mother's milk after birth.[117]

Oxytocin is actually a hormone released by the pituitary gland which stimulates contractions of the womb during childbirth. All the pre-birth preparations in the body take place thanks to this hormone. The effects of the hormone can be seen in the muscles that form the mother's womb and in cells in the muscular structure that enables the secretion of mother's milk. The effective contraction of the womb is essential if birth is to take place. Oxytocin enables the muscles that comprise the womb to contract in a very powerful manner. Moreover, oxytocin also initiates the secretion of mother's milk. This feature of the date alone-the way it contains oxytocin-is important evidence that the Qur'an is the revelation of Allah. The medical identification of the benefits of the date only became possible in recent times. Yet it was set out fourteen centuries ago in the Qur'an that Allah revealed to Maryam that she should eat dates.

Dates also contain a form of sugar that gives the body high levels of mobility and heat energy and which can be easily broken down in the body. Furthermore, this sugar is not glucose, which rapidly raises the level of blood sugar but the fruit sugar fructose. A rapid rise in blood sugar levels in diabetics in particular has a damaging effect on a great many organs and systems, especially the eyes, kidneys, heart and

circulatory system and nervous system. High blood sugar is one of the main causes of disorders as serious as loss of sight, heart attacks and kidney insufficiency.

Dates contain a great many vitamins and minerals. They are very rich in fibre, fat and proteins. They also contain sodium, potassium, calcium, magnesium, iron, sulphur, phosphorus and chlorine, as well as vitamins A, beta-carotene, B1, B2, B3 and B6. Some of the benefits of the vitamins and minerals in dates to the normal human body and especially during pregnancy can be summarised as follows:



◆ The nutritional value of dates stems from the appropriate mineral balance within them. The date also contains folic acid, a B vitamin of great importance to pregnant women. **Folic acid (B9)** is a vitamin which serves important functions in the construction of new blood cells and of amino acids, the body's building blocks, and in cell renewal. The need for folic acid thus rises significantly during pregnancy and the daily requirement doubles. When folic acid levels are insufficient, red blood cells that are larger than normal but with lower functionality emerge, along with the symptoms of anaemia, appear. Folic acid plays a particularly important role in cell division and in the formation of the genetic structure of the cell and is the only substance daily requirements of which double during pregnancy. The date is exceedingly rich in folic acid.

◆ On the other hand, the long-term nausea and physical reactions that appear during pregnancy do so because of a lack of **potassium**. Levels therefore need to be reinforced. In the same way that the large quantities of potassium in dates are of great importance in this regard, they are also important in regulating the water balance in the body. Moreover, by helping oxygen to reach the brain potassium enables one to think clearly. In addition, it provides the appropriate alkaloidal features for body fluids and stimulates the kidneys to expel toxic bodily wastes. It helps bring down high blood pressure and the formation of healthy skin.[118]

◆ The **iron** contained in dates controls the synthesis of haemoglobin in the red blood cells and ensures an appropriate level of red cells in the blood. This is of vital importance in preventing anaemia during pregnancy and the development of the baby. Red blood cells play a role in keeping cells alive by carrying oxygen and carbon dioxide in the blood. Due to dates' high iron levels, a human being can meet his or her iron requirements by eating just 15 dates a day and will thus be protected from disorders arising from iron deficiency.

◆ The **calcium** and **phosphate** in dates are important elements for skeletal growth and balancing the body's bone structure. The high levels of **phosphorus** and **calcium** in dates protect the body against bone weakness and help reduce such disorders.

◆ Scientists also emphasise the way in which dates reduce stress and tension. Research by Berkeley University experts has revealed that dates contain high levels of **vitamin B6**, which strengthens the nerves, and **magnesium,** which is very important for the kidneys. A person can meet his magnesium requirement by eating just 2-3 grains of date a day.[119]

◆ The **vitamin B1** in dates facilitates the health of the nervous system, assists the transformation of the carbohydrates in the body into energy and the use of protein and fats to meet the body's needs. **Vitamin B2** assists in the burning of protein, carbohydrates and fats for the provision of bodily energy and cell renewal.

◆ The body's **vitamin A** requirement rises during pregnancy. Thanks to the vitamin A it contains, the date improves vision and bodily resistance and strengthens the teeth and bones. Dates are also especially rich in **beta-carotene**.[120] Beta-carotene helps prevent cancer by controlling molecules that attack the cells.

◆ In addition, unlike dates, other fruits are generally lacking in **protein.**[121] Thanks to this feature, dates enable the body to protect itself against illness and infection, to renew cells and ensure fluid balance. Meat is also a useful foodstuff but maybe not as much as the date, which is a fresh fruit, especially at such a time. Indeed, excessive consumption of meat during pregnancy can actually lead to toxicity in the body. It is much better for pregnant women to choose fruit and vegetables, which are light and easily digested.

All these facts about dates reveal Allah's infinite knowledge and compassion for human beings. As we have seen, the benefits of the date, especially during pregnancy and only recently established by modern medical science, were indicated in the Qur'an many years ago.

THE FIG: A FRUIT WHOSE PERFECTION HAS ONLY RECENTLY BEEN REVEALED

[I swear] by the fig and the olive. (Qur'an, 95:1)

The reference to the fig in the first verse of Surat at-Tin is a most wise one in terms of the benefits imparted by this fruit.

The Benefits of the Fig for Human Beings

Figs have a higher fibre level than any other fruit or vegetable. One single dried fig provides two grams (0.07 ounce) of fibre: 20% of the daily recommended intake. Research over the last fifteen years or so has revealed that the fibre in plant foods is very important for the regular functioning of the digestive system. It is known that fibre in foods assists the digestive system and also helps reduce the risk of some forms of cancer. Nutritionists describe eating figs, which are **rich in fibre**, as an ideal way of increasing one's fibre intake.

Fibrous foodstuffs are divided into two types: soluble and insoluble. Foods rich in insoluble fibre facilitate the passage of substances to be expelled from the body through the intestine by adding water to them. They thus accelerate the digestive system and ensure its regular functioning. It has also been established that foods containing insoluble fibre have a protective effect against colon cancer. Foods rich in soluble fibre, on the other hand, have been shown to reduce cholesterol levels in the blood by more than 20%. These are therefore of the greatest importance in reducing the risk of heart attack. Excessive levels of cholesterol in the blood collect in the arteries, hardening and narrowing them. Depending on which organ's blood vessels the cholesterol accumulates in, disorders connected to that organ arise. For example, if cholesterol accumulates in the arteries that feed the heart, problems such

as heart attacks result. Accumulations of cholesterol in the kidney veins can lead to high blood pressure and kidney deficiency. Furthermore, the intake of soluble fibre is important in terms of regulating blood sugar by emptying the stomach because sudden changes in blood sugar can lead to life-threatening disorders. Indeed, societies with fibre-rich diets have been shown to have far lower incidences of illnesses such as cancer and heart disease.[122]

It is also another major health advantage for soluble and insoluble fibres to be present at one and the same time. It has been shown that when both forms are present together, they are much more effective in preventing cancer than when they are on their own. The presence of both forms of fibre, soluble and insoluble, in the fig makes it a most important foodstuff in this regard.[123]

Dr. Oliver Alabaster, Director of the Institute for Disease Prevention at the George Washington University Medical Centre, refers to figs in these terms:



… [H]ere is an opportunity to add a really healthy, high fiber food to your diet. Choosing figs and other high fiber foods more frequently means that you'll naturally choose potentially harmful foods less frequently-and this is great for your lifelong health.[124]

According to the California Fig Advisory Board, it is believed that the **antioxidants** in fruit and vegetables protect against a number of diseases. Antioxidants neutralise harmful substances (free radicals) that arise as a result of chemical reactions in the body or else are taken in from the outside and thus prevent the destruction of cells. In one study performed by the University of Scranton, it was determined that dried figs had a much higher level of the phenol makeup, which is rich in antioxidants, than other fruits. Phenol is used as an antiseptic to kill micro-organisms. The level of phenol in figs is much higher than that in other fruits and vegetables.[125]

Another study, by Rutgers University in New Jersey, revealed that due to the essential fatty acids **omega-3** and **omega-6** and **phytosterol** contained in dried figs, they can play a considerable part in reducing cholesterol.[126] It is known that omega-3 and omega-6 cannot be manufactured in the body and need to be absorbed with food. Furthermore, these fatty acids are indispensable to the proper functioning of the heart, brain and nervous system. Phytosterol permits the cholesterol in animal products, which has the potential to harden the heart's arteries, to be expelled from the body without entering the blood stream.

Despite being one of the oldest fruits known to man, the fig-described as "nature's most nearly perfect fruit" by the California Fig Advisory Board[127] -has been rediscovered by food producers. The nutritional value of this fruit and its health benefits have led to its acquiring a whole new importance.

The fig can constitute a part of just about any special diet. Since figs do not naturally contain fat, sodium or cholesterol but have high levels of fibre, they are an ideal food for those trying to lose weight. At the same time, figs have higher mineral contents than any other known



fruit. Forty grams (1.4 oz) of figs contains 244 mg (0.008 oz) of potassium (7% of the daily requirement), 53 mg (0.002 oz) of calcium (6% of the daily requirement) and 1.2 mg (0.00004 oz) of iron (6% of the daily requirement).[128] The **calcium** level in figs is very high: The fig ranks second after the orange in terms of calcium content. A crate of dried figs provides the same level of calcium as a crate of milk.

Figs are also thought of as a medicine which gives strength and energy to long-term patients as they seek to recover. They eliminate physical and mental difficulties and give the body strength and energy. The most important nutritional component of figs is sugar, which comprises 51-74% of all fruits. The sugar level in figs is one of the highest. Figs are also recommended in the treatment of asthma, coughs and chills.

The benefits we have

restricted ourselves to mentioning here are an indication of the compassion Allah feels for human beings. Our Lord provides the substances required by human beings in this fruit, which is so pleasant to eat, already packaged and at the ideal levels for human health. The way that this special blessing from Allah is mentioned in the Qur'an may indicate the importance of the fig for human beings. (Allah knows best.) From the point of view of human health, the nutritional value of the fig was only established with the advance of medicine and technology. This is another indication that the Qur'an is indisputably the word of Allah, the Omniscient.

Fresh Fig Nutritional Value (100 grams)

Calories (kcal)	74
Fibre (g)	3
Fat (g)	0
Protein (g)	1
Sugar (g)	16
Vitamin A (IU)	142
Vitamin C (mg)	2
Vitamin B1	0.1
Vitamin B2	0.1
Vitamin B6	0.1
Sodium	1
Potassium	232
Calcium	35
Phosphorus	232
Magnesium	17
Iron	0.4
Manganese	0.1
Copper	0.1
Selenium	0.2
Zinc	0.2

Dried Fig Nutritional Value (100 grams)

Calories (kcal)	249
Fibre (g)	10
Fat (g)	1
Protein (g)	3
Sugar (g)	48
Vitamin A (IU)	10
Vitamin C (mg)	1.2
Vitamin B1	0.1
Vitamin B2	0.1
Vitamin B6	0.1
Sodium	10
Potassium	680
Calcium	162
Phosphorus	67
Magnesium	68
Iron	3.07
Manganese	0.8
Copper	0.3
Selenium	0.6
Zinc	0.5

FISH: A VALUABLE SOURCE OF NUTRITION

Anything you catch in the sea is lawful for you, and all food from it, for your enjoyment and that of travellers… (Qur'an, 5:96)

The fact the average age of people developing and dying from heart disease is constantly decreasing has considerably increased the importance attached to coronary health. Although a great many advances have been registered in the treatment of heart disease, experts in the field basically recommend that careful precautions be taken before such diseases ever arise. Experts also recommend one important foodstuff for the healthy functioning of the heart and the prevention of disease: **fish**.

The reason why fish is such an important source of nutrition is that it both provides substances necessary for the human body and also reduces the risk of various diseases. For example, it has been revealed that when fish-which acts as a shield in terms of health with the omega-3 acid it contains-is consumed on a regular basis, it reduces the risk of heart disease and strengthens the immune system.

The fact that fish, the health benefits of which have only newly been scientifically registered, is an important nutritional source is revealed in the Qur'an. Almighty Allah makes the following references to seafood in the Qur'an: "**It is He Who made the sea subservient to you so that you can eat fresh flesh from it...**" (Qur'an, 16:14), **"Anything you catch in the sea is lawful for you, and all food from it, for your enjoyment and that of travellers…"** (Qur'an, 5:96) Furthermore, particular attention is drawn to fish in Surat al-Kahf, in which it is revealed that the Prophet Musa (as) set out on a long journey with his servant and that they took fish along with them to eat:

But when they reached their meeting-place, they forgot their fish which quickly burrowed its way into the sea. When they had gone a

distance further on, he said to his servant, *"Bring us our morning meal. Truly this journey of ours has made us tired."* He said, "Do you see what has happened? When we went to find shelter at the rock, I forgot the fish…" (Qur'an, 18:61-63)

It is noteworthy that in Surat al-Kahf fish should be specially chosen as a foodstuff after a long, tiring journey. Therefore, one of the pieces of wisdom in this tale may well be an indication of the nutritional benefits of fish. (Allah knows best.)

In fact, when we examine the nutritional properties of fish, we encounter some very striking facts. Fish, given to us as a blessing by our Lord, are a perfect food, particularly in terms of protein, vitamin D and trace elements (certain elements found in minimal quantities in the body but which are still of great importance to it). Due to the minerals they contain-such as phosphorus, sulphur and vanadium-fish encourages growth and enables tissues to recover. Fish meat also assists in the formation of healthy teeth and gums, benefits the complexion, makes the hair healthier and contributes to the fight against bacterial infection. It also plays an important role in the prevention of heart attacks as it beautifully regulates the level of cholesterol in the blood. It helps the body to break down and use starch and fats, making it stronger and more energetic. On the other hand, it also influences the functioning of mental activities. In the event that the vitamin D and other minerals contained in fish are not consumed in sufficient quantities, disorders such as rickets (bone weakness), gum disease, goitre and hyperthyroid may all arise.[129]

In addition, modern science has also discovered that the omega-3 fatty acids in fish also occupy an important place in human health. These fats have even been described as essential fatty acids.

The Benefits of Omega-3 in Fish Oil

There are two kinds of unsaturated fatty acid in fish oil which are particularly important for our health: **EPA** (eicosapentaenoic acid) and

DHA (docosahexaenoic acid). EPA and DHA are known as polyunsaturated fats and contain the important omega-3 fatty acids. Since the fatty acids omega-3 and omega-6 are not manufactured in the human body, they need to be taken in from the outside.

There is a large body of evidence relating to the benefits to human health of fish oil, the actual benefit stemming from its omega-3 fatty acid content. Despite being present in vegetable oils, these omega-3 fatty acids are less effective in relation to human health. However, marine plankton is very effective at turning omega-3 into EPA and



DHA. When fish eat plankton, their constitution becomes much richer in EPA and DHA. That, in turn, makes fish one of the richest sources of these vitally important fatty acids.[130]

Vital Benefits of the Fatty Acids Found in Fish

One of the main features of the fatty acids in fish is the contribution they make to the body's energy production. These fatty acids carry out electron transfers by attaching themselves to oxygen in the body and permit energy to be produced for various chemical processes within it. There is therefore considerable evidence that a diet rich in fish oil helps combat fatigue and increases mental and physical capacity. Omega-3 increases the individual's powers of concentration as much as it does his or her energy levels. There is a scientific foundation to the old saying "fish is good for the brain": The main compound in brain fat is DHA, which contains omega-3 fatty acids.[131]

The Importance of Fish for a Healthy Heart and Arteries

The omega-3 fatty acid in fish is acknowledged to protect against cardiovascular disease by reducing blood pressure and the cholesterol and triglyceride in the blood.[132] Triglyceride is a form of fat and resembles LDL (bad cholesterol) which is high in fat and low in protein content. A raised triglyceride level, especially together with high cholesterol, increases the risk of heart disease. In addition, fish oils reduce life-threatening post-heart attack abnormal heart rhythms.

In one study by the American Medical Association, it was observed that heart attack levels in women eating five portions of fish a week fell by one-third. This is thought to stem from the omega-3 fatty acids in fish oil causing less blood clotting. The normal speed of blood in our veins is 60 kmph (37.3 mph) and it is of vital importance for the blood to be of the right viscosity and for the density, quantity and speed to be at normal levels. The worst danger for our blood-apart from normal conditions of bleeding-is for it to clot and lose the ability to flow

properly. Fish oils are also effective in reducing blood clotting by preventing the thrombocytes in the blood (blood platelets that concentrate the blood in the event of bleeding) from adhering to one another. Otherwise, blood thickening can lead to narrowing of the arteries. In turn, this can lead to many organs in the body-especially the heart, brain, eyes and kidneys-receiving an inadequate blood supply, function deceleration and eventually, loss of function. For example, when an artery is totally blocked on account of clotting this can lead to heart attack, paralysis or other disorders, depending on the location of the artery.

Omega-3 fatty acids also play an important role in the production of the molecule haemoglobin, that carries oxygen in the red blood cells, and in controlling the nutrients passing through the cell membrane. They also prevent the damaging effects of fats harmful to the body. Research reveals that omega-3 fatty acids found in fish reduce the risk of heart attack.[133]

Importance for the Development of New Born Babies

Being an important component of the brain and eye, omega-3 fatty acids have been the subject of research, especially over the last 10 years, in connection with the needs of new born babies. There is a considerable body of evidence relating to the importance of omega-3 to the development of the foetus in the mother's womb and of the new-born



baby. Omega-3 is of the greatest importance for the proper development of the brain and nerves throughout pregnancy and in early babyhood. Scientists emphasise the importance of mother's milk since it is a natural and perfect store of omega-3.[134]

Benefits for Joint Health

The major risk in rheumatoid arthritis (a painful joint condition linked to rheumatism) is that of wearing of the joints, leading to irreparable damage. It has been proven that a diet rich in omega-3 fatty acids prevents arthritis and reduces discomfort in swollen and sensitive joints.[135]

Benefits Regarding the Healthy Functioning of the Brain and Nervous System

A large number of studies have revealed the effects of omega-3 fatty acids on the healthy functioning of the brain and nerves. In addition, it has been shown that fish oil reinforcement can reduce symptoms of depression and schizophrenia and prevent Alzheimer's disease (a brain disease which causes loss of memory and hinders day-to-day activities). For example, reductions in such problems as anxiety, stress and sleeping difficulties have been observed in individuals suffering from depression who took 1 gram (0.035 oz) of omega-3 fatty acid over a period of 12 weeks.[136]

Benefits against Inflammatory Disorders and Strengthening of the Immune System

At the same time, omega-3 fatty acids have an anti-inflammatory (infection preventing) function. Omega-3 can therefore be employed in the following diseases:[137]

◆ Rheumatoid arthritis (joint infection linked to rheumatism),

◆ Osteoarthritis (a form of arthritis gradually degenerating the functions of joints)

◆ Ulcerative colitis (ulcers linked to the inflammation of the colon), and

◆ Lupus (a disease which causes patches on the skin).

It also protects myelin (the material surrounding nerve cells). It is therefore used in the treatment of

◆ Glaucoma (an eye disorder marked by abnormally high pressure within the eyeball that may even lead to blindness)

◆ Multiple sclerosis (a serious progressive disease resulting from tissue hardening in the brain and spinal cord),

◆ Osteoporosis (a disease leading to structural weakening in the bone structure)

◆ Diabetes patients.

In addition, it is also reported to be useful in the treatment of

◆ Migraine patients,

◆ Anorexia (a possibly fatal eating disorder)

◆ Burns

◆ Problems concerning skin health.

There is also wide-ranging evidence that societies such as the Greenland Eskimos and Japanese, who eat a lot of fish, rich in omega-3 fatty acid, have a much lower incidence of heart and artery disease, asthma and psoriasis. Fish is therefore recommended as a form of treatment and is particularly recommended by nutritionists on account of its proven benefits for coronary health.

Additional benefits to those outlined above are emerging every day. Moreover, it has only been possible to reveal the health benefits of fish by a great many scientists working in well-equipped research laboratories. The fact that such a valuable source of nutrition is indicated in the Qur'an, and especially that it is described as a fatigue eliminator in Surat al-Kahf, is nothing short of awe-inspiring. All the benefits provided by fish are a great blessing given us by our Lord. As with all foods, it is Allah, the Lord of the Worlds, Who has created the superior structure in fish for our benefit.

PORK AND ITS HARMFUL EFFECTS ON HEALTH

He has only forbidden you carrion, blood and pork and what has been consecrated to other than Allah. But anyone who is forced to eat it-without desiring it or going to excess in it-commits no crime. Allah is Ever-Forgiving, Most Merciful. (Qur'an, 2:173)

Eating pork is harmful to health in a great many regards. This harm still persists today, despite all the precautions that are taken. First and foremost, no matter how clean the farms and environments on which it is raised may be, the pig is not by nature a clean-living animal. It often plays in, and even eats, its own excrement. Due to this and its biological structure, the pig produces much higher levels of antibodies in its body than other animals. In addition, far higher levels of growth hormone are produced in the pig compared to those in other animals and human beings. Naturally, these high levels of antibodies and growth hormone pass across to and collect in the pig's muscle tissue. Pork meat also contains high levels of cholesterol and lipids. It has been scientifically proven that these significant amounts of antibodies, hormones, cholesterol and lipids in pork represent a serious threat to human health.

The existence of above-average numbers of obese individuals in the populations of countries such as the USA and Germany, in which large quantities of pork are consumed, is now well-known. When exposed to excessive quantities of growth hormone as a result of a pork-based diet, the human body first puts on excessive weight and then suffers physical deformations.

Another harmful substance in pork is the "trichina" worm. This is frequently found in pork and when it enters the human body, it settles directly in the muscles of the heart and represents a possibly fatal threat. Even though it is now technically possible to identify pigs that

are infected with trichina, no such methods were known in earlier centuries. That means that everyone who ate pork risked infection by trichina and possible death.

All these reasons are just a part of the wisdom in our Lord's prohibition on the consumption of pork. Moreover, this commandment of our Lord's provides complete protection from the harmful effects of pork under any conditions.

Until the 20th century, it was impossible to be aware of the danger posed to human health by pork. The fact that the Qur'an, revealed fourteen centuries ago, warns against this harm which has been incontrovertibly revealed with modern medical equipment and biological tests, is one of the miracles demonstrating that the Qur'an is the revelation of Allah, the Omniscient. Despite all the precautionary measures and inspections that take place in modern-day pig rearing, the fact that pork is physiologically incompatible with the human body and is a variety of meat harmful to human health has not altered.



This picture shows the "trichina" worm.

THE OLIVE: A HEALTH-GIVING PLANT

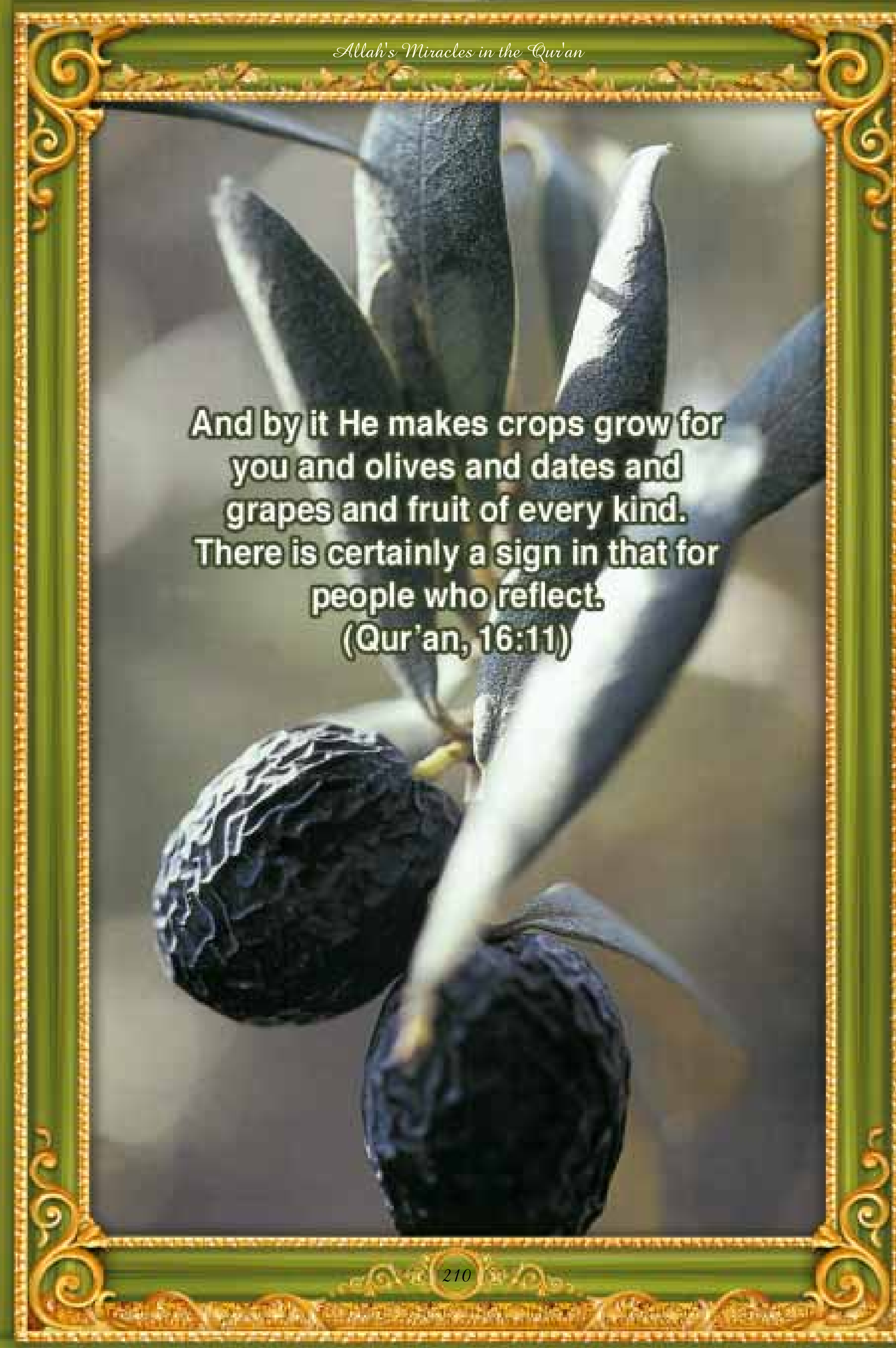
One of the foods to which attention is drawn in the Qur'an is the olive. Research in recent years has revealed that the olive is not just a delicious food but also represents an important source of good health. In addition to the olive itself, olive oil is also an important source of nutrition. Attention is drawn to the oil of the olive tree in these terms in the Qur'an:

> **Allah is the light of the heavens and the Earth. The metaphor of His light is that of a niche in which is a lamp, the lamp inside a glass, the glass like a brilliant star, lit from *a blessed tree, an olive*, neither of the east nor of the west, *its oil all but giving off light* even if no fire touches it. Light upon light. Allah guides to His light whoever He wills and Allah makes metaphors for humanity and Allah has knowledge of all things. (Qur'an, 24:35)**

The expression "*mubaarakatin zaytoonatin*" in the above verse describes the olive as being "plentiful, sacred, auspicious, providing countless blessings." Olive oil, referred to in the term "*zaytuhaa*," is known as one of the most highly recommended types of oil by all experts, especially for coronary and arterial health. Its health benefits may be summarised as follows:

◆ Benefits for Coronary and Arterial Health:

Most of the fatty acids in olives and olive oil are mono-unsaturated. Mono-unsaturated fatty acids do not contain cholesterol. Therefore, olive oil does not raise cholesterol levels but instead keeps them under control. Olive oil also contains omega-6 linoleic acid (EFA: essential fatty acid), which is essential for the human body. Due to this feature, health-related bodies (such as The World Health Organization) recommend that at least 30% of the fatty acid consumed in societies in which


And by it He makes crops grow for you and olives and dates and grapes and fruit of every kind. There is certainly a sign in that for people who reflect.
(Qur'an, 16:11)

hardened artery and diabetes levels are high should consist of omega-6. This increases the importance of the olive still further.[138]

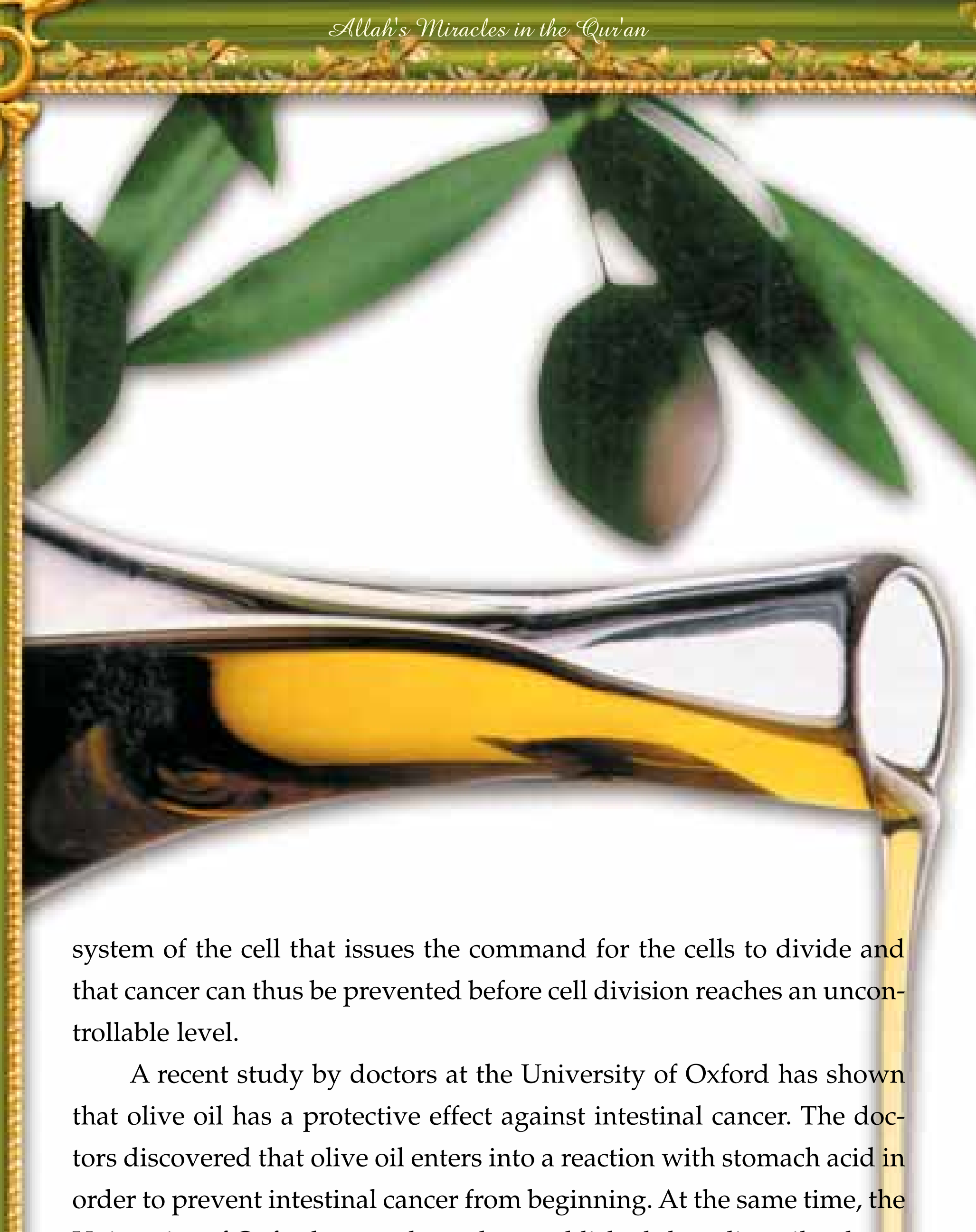
Studies in this area have revealed much lower LDL (bad cholesterol) and higher antioxidant levels in people who consume 25 millilitres (about two dessertspoonfuls) of natural olive oil a day for one week.[139] Antioxidants are important as they neutralise the harmful substances in the body known as free radicals and prevent cell damage. It has also been established in a great many studies that the consumption of olive oil reduces cholesterol levels and prevents heart disease.[140]

Olive oil is also recommended for patients with heart and artery disease since it reduces the level of harmful cholesterol (LDL) in the bloodstream and raises that of useful cholesterol (HDL).[141] In countries with high occurrences of heart and artery diseases, saturated fats with high cholesterol content are generally consumed.

In addition, olive oil does not disrupt the proportion of omega-6 to that of omega-3. It is very important that omega-3 and omega-6 be present in the body at specific levels because any imbalance in these proportions can lead to progression in many diseases, especially those of the heart and immune system and cancer.[142] For all these reasons, many people enjoy good health thanks to olive oil. The American Heart Association suggests that in order to reduce the risk of heart disease high mono-unsaturated fats can be an alternative to a 30% reduced fat diet.[143]

Cancer Prevention

One study, published by *The Archives of Internal Medicine*, showed that women who consume high levels of mono-unsaturated fat have a lower risk of developing breast cancer.[144] Another study by scientists at the University at Buffalo, The State University of New York demonstrated that b-sitosterol, a fat found in vegetable oils such as olive oil, helps prevent the formation of prostate cancer cells. The researchers concluded that b-sitosterol strengthens the internal communication

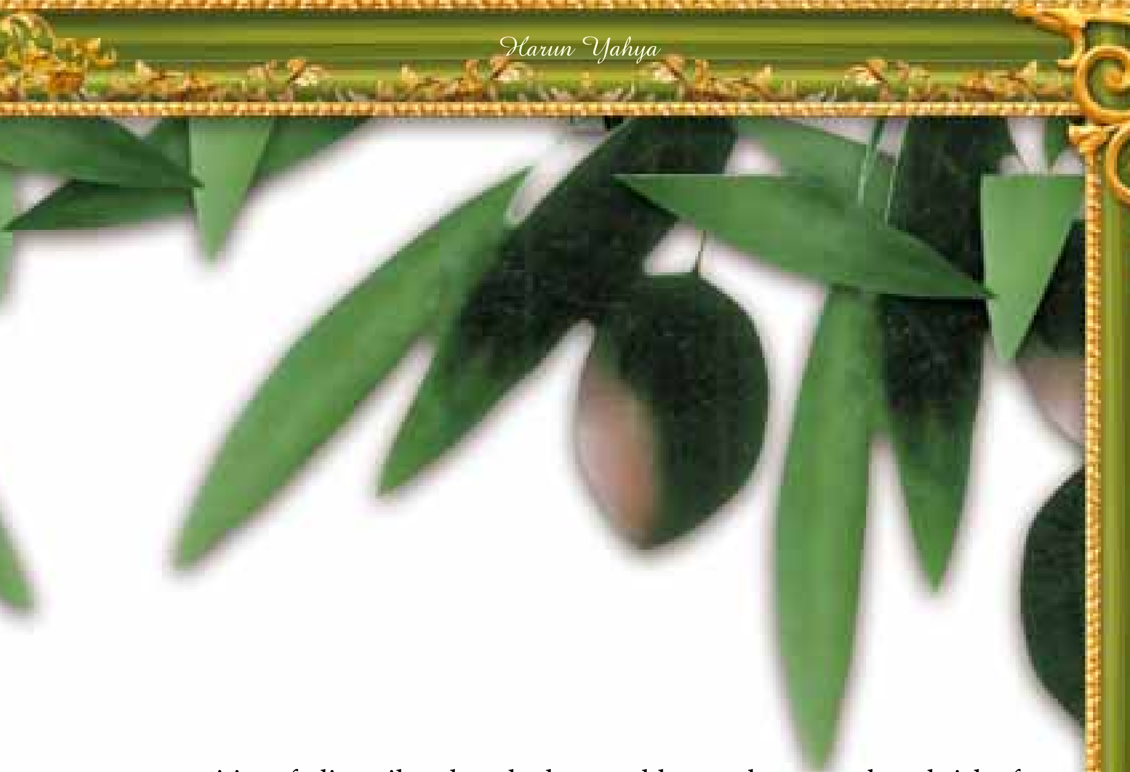


system of the cell that issues the command for the cells to divide and that cancer can thus be prevented before cell division reaches an uncontrollable level.

A recent study by doctors at the University of Oxford has shown that olive oil has a protective effect against intestinal cancer. The doctors discovered that olive oil enters into a reaction with stomach acid in order to prevent intestinal cancer from beginning. At the same time, the University of Oxford researchers also established that olive oil reduces the level of bile and raises that of DAO (the enzyme diamine oxidase), thus protecting against abnormal cell growth and cancer.[145]

◆ Prevention of Arthritis

According to researchers' reports, people who consume large



quantities of olive oil and cooked vegetables can have a reduced risk of rheumatic arthritis, a chronic inflammatory disease of the joints.

◆ Olive Oil Assists Bone Development

The vitamins E, A, D and K contained in olive oil are particularly important from the point of view of assisting bone development in adults and children, and in strengthening the bones by fixing calcium. It is also recommended for the elderly as it is easily digested and through its minerals, it assists with the use of vitamins in the body. It also prevents calcium loss by stimulating bone mineralisation.[146] Bones are the organism's mineral structure storehouses and an absence of mineral accumulation in the bones can lead to serious complications such as bone softening. Olive oil has a most beneficial effect on the skeleton in this regard.

◆ Prevention of Aging

Since the vitamins contained in olive oil have a cell renewing effect they are also employed in the treatment of the elderly, as well as nour-

ishing and protecting the skin. As foodstuffs are transformed into energy in our bodies, certain substances known as oxidants are formed. With the high levels of anti-oxidants it contains, olive oil prevents damage by harmful substances, renews our cells and delays aging in the tissues and organs. Olive oil is also rich in vitamin E, which suppresses the free radicals that destroy the cells in our bodies and cause aging.

◆ Contribution to Child Development

Due to the linoleic acid (omega-6 fatty acid) contained in olives and olive oil, these are a most healthy food for newborn babies and



growing children. A deficiency in linoleic acid leads to the emergence of a retardation of development in babyhood and various skin disorders.[147]

Olive oil contains anti-oxidant elements that prevent the destructive effects of harmful substances in our bodies, and fatty acids of great importance to human health. These support the hormones and assist in cell membrane formation.

Olive oil possesses a balanced polyunsaturated compound at a similar level to that in human milk. Olive oil is a sufficient source of these fatty acids, which cannot be obtained from the human body but which are of the most essential importance to it. These factors make olive oil very important for new-born babies.

Since it contributes to the natural development of the baby's brain and nervous system before and after birth, olive oil is the only oil recommended for mothers by experts. As well as containing similar levels of linoleic acid to those of mother's milk, when olive oil is added to fatless cow's milk, it becomes as natural a food source as mother's milk itself.[148]

◆ Blood Pressure Reduction

One study published in the 27 March 2000 edition of *Archives of Internal Medicine* once more stressed the beneficial effect of olive oil on high blood pressure. Medicines to reduce high blood pressure are also made from olive leaves.

◆ Benefits for the Internal Organs

Whether consumed hot or cold, olive oil protects the stomach against diseases such as gastritis and ulcers by reducing gastric acid levels.[149] In addition to this, by activating the bile, it makes it perfect. It regulates the discharge of the gall bladder and reduces the risk of bile stone formation.[150] Moreover, thanks to the chloride it contains, it also assists the functioning of the liver and thus helps the body eliminate

waste products. In addition, it also has a beneficial effect on the brain arteries.[151]

On account of all these properties, olive oil has attracted considerable expert attention in recent years.[152] Some of the comments made by experts are as follows:

Jean Carper, a prominent authority in the field of health and nutrition, the CNN award-winning correspondent, columnist and author of *The Food Pharmacy* and *Food-Your Miracle Medicine*:

> New Italian research finds olive oil contains antioxidants... that combat disease processes, including LDL cholesterol's ability to clog arteries.

Pat Baird, a dietician and nutrition consultant:

> I love the whole idea of olive oil's versatility... the more we know about it, the more we learn about its great contribution to good health.

Dr. Dimitrios Trichopoulos, chairman of the Department of Epidemiology, Harvard University School of Public Health:

> American women might actually experience as much as a fifty percent (50%) reduction in breast cancer risk if they consumed more olive oil in place of saturated fats.
>
> Olive oil has a protective effect against some types of malignant tumors: prostate, breast, colon, squamous cell, and oesophageal.

D. Peck of the School of Medicine, University of Miami:

> Olive oil has been shown to strengthen the immune system in mice...

Bruno Berra of the Institute of General Physiology and Biological Chemistry, University of Milan:

> … [T]he minor polar components of extra virgin olive oil increase significantly the resistance of LDL to oxidation.

A.A. Rivellese, G. Riccardi and M. Mancini of the Institute of Internal Medicine and Metabolic Diseases at Federico II University, Naples:

> Olive oil prevents insulin resistance and ensures better control of the glucose in the blood.

Patrizia Galletti of the Second University of Naples, Faculty of Medicine and Surgery:

> Dietary intake of olive oil polyphenols may lower the risk of reactive oxygen metabolite-mediated diseases such as some gastrointestinal diseases and atherosclerosis. Olive oil hydroxytyrosol protects human erythrocytes against oxidative damage.

Frank Sacks of the Harvard School of Public Health:

> An olive-oil-rich diet is more effective than a low-fat diet in controlling and treating obesity. Moreover, it leads to longer-lasting weight loss and it is easier to keep to…

As we have seen, a great many scientists today think that an olive oil-based diet constitutes the ideal nutritional model. It is stated that on account of these properties, olives and olive oil should be the fundamental constituents of every meal in one's daily nutrition programme. The benefits of the olive plant, emphasised by Allah in many verses of the Qur'an, have been discovered in parallel to the advances made by medical science.

> **It is He Who sends down water from the sky. From it you drink and from it come the shrubs among which you graze your herds. And by it He makes crops grow for you and olives and dates and grapes and fruit of every kind. There is certainly a Sign in that for people who reflect. (Qur'an, 16:10-11)**

CORONARY BY-PASS SURGERY

Didn't We *open up and expand your breast* for you and remove your load from you which weighed down your back? Did We not raise your renown high? For truly with hardship comes ease; truly with hardship comes ease. (Qur'an, 94:1-6)

In order for it to survive and function, every organ needs to be nourished by means of the blood. Blood flows to the heart through the coronary artery. In cases of hardening of the arteries (atherosclerosis), narrowing and blockages can arise in these arteries. When the condition progresses, the passage of the blood is obstructed and the heart receives insufficient supply. This leads to chest pains, which show that the heart is unable to function properly and also to heart attacks.

The expression "*A lam nashrah laka sadraka*" in the above verse-translated as "**Didn't we open up and expand your breast for you…**"-may be a sign of heart disorders of this kind and present-day coronary by-pass surgery. (Allah knows best.) That is because the first meaning of the term "*lam nashrah*" expresses the verb "to cut open flesh and similar substances." Indeed, in such operations, the heart is accessed by splitting the breastbone into two. As a result of the operation, the blood is enabled to flow again and chest pain is eliminated. The term "expand" in the above verse may be a sign of the removal of such congestion of the arteries.

Furthermore, it is most wise that immediately after this Sura Allah should swear by the olive, which is so beneficial to the heart. (Qur'an, 95:1)

HEALTH BENEFITS OF MOVEMENT, WASHING AND DRINKING WATER

One of the forms of behaviour noted in the Qur'an is concealed in a revelation vouchsafed to the Prophet Ayyub (as):

Remember Our servant Ayyub when he called on his Lord: "Satan has afflicted me with exhaustion and suffering." "Stamp your foot! Here is a cool bath and water to drink." (Qur'an, 38:41-42)

One of the pieces of advice given to Prophet Ayyub (as) by Allah in the face of the exhaustion and suffering inflicted by Satan is "stamping the foot." This expression in the verse may be indicating the benefits of movement or sport.

During sport, blood flow is accelerated, particularly by the movement of long muscles such as those in the legs (isometric movements) and the level of oxygen reaching the cells increases. As a result, the individual's fatigue is eliminated and he or she is energised as toxic substances are expelled from the body.[153] At the same time, the body acquires increased resistance to microbes. People who take regular exercise possess broad, clean arteries and this has the effect of preventing them from clogging and thus of preventing heart disease.[154] In addition, regular exercise plays a role in the prevention of diabetes by regularising the blood sugar balance. The beneficial effects of sport on the liver raise the levels of good cholesterol.[155]

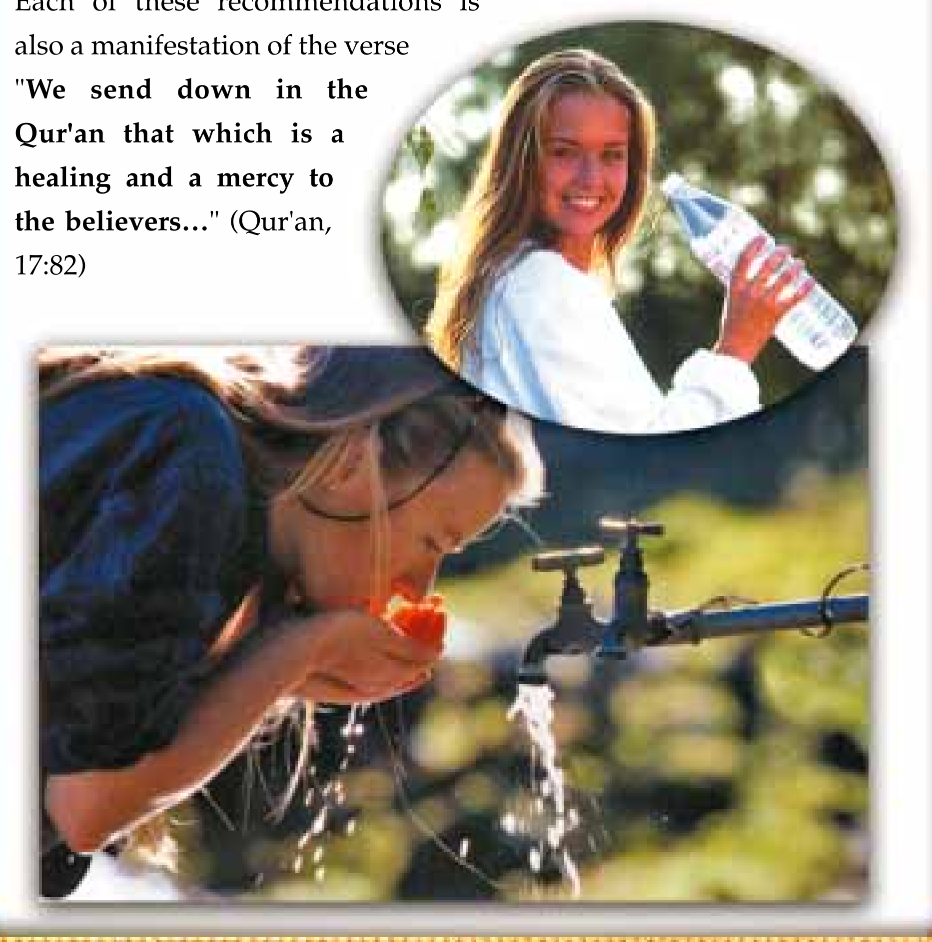
What is more, walking barefoot is a very effective method of releasing the static electricity accumulated by the body. It serves as a kind of earthing of the body.

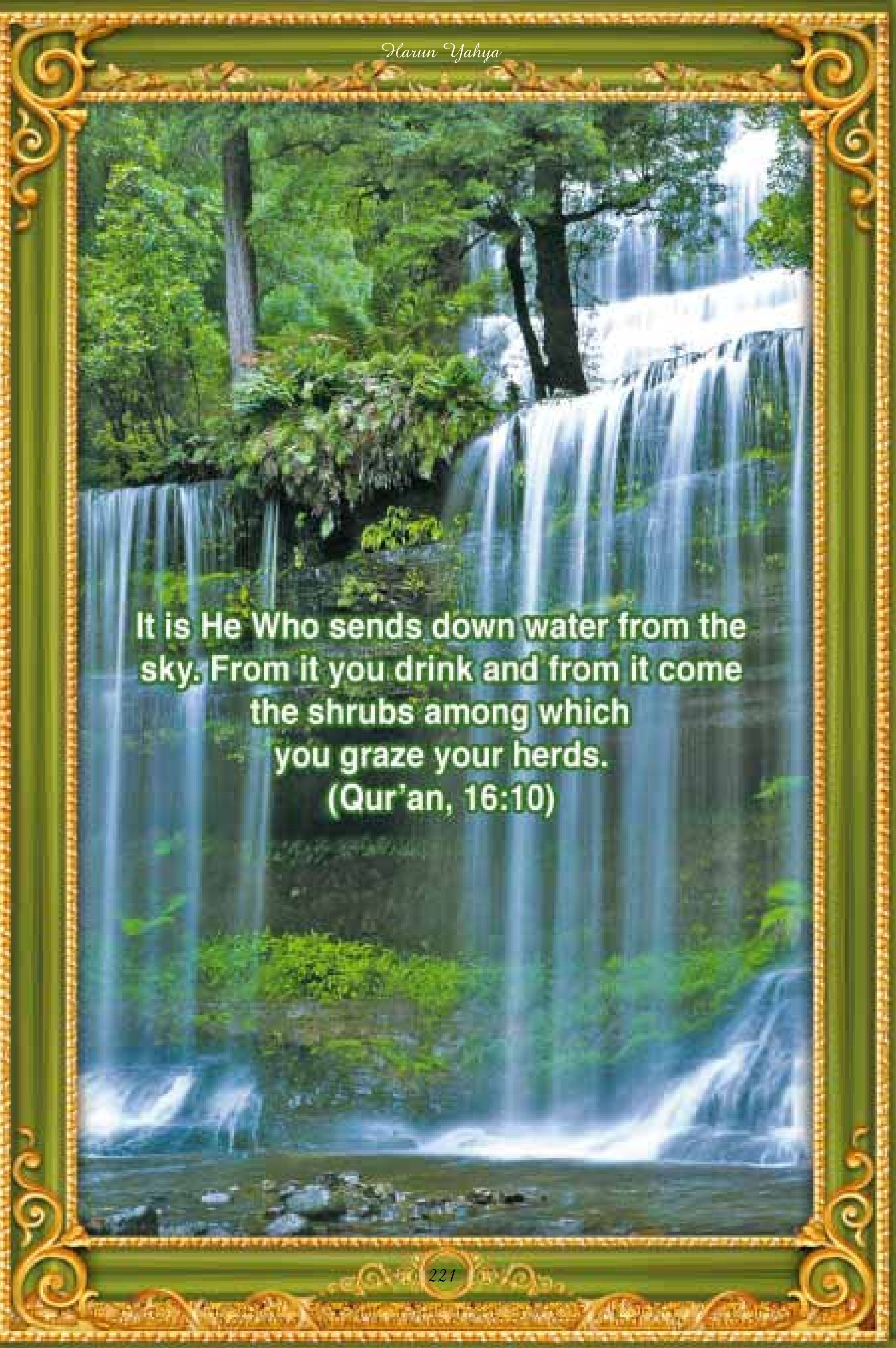
As emphasised in the verse, washing is also known to be the most effective method of discharging the static electricity in the body. In addition to providing physical cleanliness, washing also reduces stress and tension. Washing therefore has a curative effect on many physical

and psychological disorders, especially stress and fevers.

In the verse, in addition to washing, drinking water is also recommended. The beneficial effects of water on all organs of the body cannot be ignored. The health of many organs-such as the sweat glands, the stomach, the intestines, the kidneys and the skin-is directly related to the presence of adequate amounts of water in the body. The treatment of all such disorders, as may arise in this field, is possible by means of providing extra water. The answer to fatigue, tiredness and drowsiness is again to increase the level of water in the body and thus to cleanse it of impurities.

Implementing each of these recommendations, of vital importance to our physical and mental health, will bring about the ideal results. Each of these recommendations is also a manifestation of the verse "**We send down in the Qur'an that which is a healing and a mercy to the believers…**" (Qur'an, 17:82)




It is He Who sends down water from the sky. From it you drink and from it come the shrubs among which you graze your herds.
(Qur'an, 16:10)

THE EXISTENCE OF MICROSCOPIC LIFE

Glory be to Him Who created all the pairs: from what the earth produces and from themselves and *from things unknown to them*. (Qur'an, 36:36)

... *And He creates other things you do not know.* (Qur'an, 16:8)

The above verses indicate the existence of life forms unknown to people at the time of the revelation of the Qur'an. Indeed, with the discovery of the microscope, new living things too small to be seen with the naked eye have also been discovered by man. People have therefore begun to learn about the existence of these life forms, indicated in the Qur'an. Other verses which point to the existence of micro-organisms, which are invisible to the naked eye and generally consist of a single cell, read:

... He is the Knower of the Unseen, Whom not *even the weight of the smallest particle* eludes, either in the heavens or in the earth; nor is there *anything smaller or larger than that* which is not in a Clear Book. (Qur'an, 34:3)

... Not *even the smallest speck* eludes your Lord, either on earth or in heaven. Nor is there *anything smaller than that, or larger,* which is not in a Clear Book. (Qur'an, 10:61)

There are 20 times more members of this secret world, which is spread all over the planet, micro-organisms in other words, than there are animals on Earth. These micro-organisms, invisible to the naked eye, comprise bacteria, viruses, fungi, algae and Acarina (mites and ticks). They also constitute an important element in the balance of life on Earth. For example, the nitrogen cycle, one of the fundamental components of the formation of life on Earth, is made possible by bacteria. Root fungi are the most important element in plants being able to take up minerals from the soil. The bacteria on our tongues prevent us being

poisoned by food containing nitrates, such as salad stuffs and meat. At the same time, certain bacteria and algae possess the ability to make photosynthesis, the fundamental element in life on Earth, and share that task with plants. Some members of the Acarina family decompose organic substances and turn them into foodstuffs suitable for plants. As we have seen, these tiny life forms, about which we have only learned with modern technological equipment, are essential to human life.

Fourteen centuries ago, the Qur'an indicated the existence of living things beyond those which can be seen with the naked eye. This is another spectacular miracle contained within the verses of the Qur'an. (See Harun Yahya, *The Miracle of the Microworld*)



THE EXISTENCE OF ANIMAL SOCIETIES

There is no creature crawling on the Earth or flying creature, flying on its wings, who are not communities just like yourselves… **(Qur'an, 6:38)**

As a result of modern-day animal and bird ecology study, we know that all animals and birds live in the form of separate societies. Lengthy and wide-ranging studies have shown that there is a rather systematic social order among animals.

Honey bees, for example, whose social life amazes scientists, build their nests in colonies in tree hollows or other covered areas. A bee colony consists of a queen, a few hundred males and 10-80,000 workers. As we have already mentioned, there is only one queen in every colony and her fundamental task is that of laying eggs. In addition, she secretes important substances which maintain the unity of the colony and allow the system within the hive to function. The males' only function is to fertilise the queen. All other functions-such as building honey combs in the hive, gathering food, creating royal jelly, regulating the



temperature of the hive, cleanliness and defence-are carried out by the workers. There is order in every phase of life in the hive. All duties, from caring for the larvae to provision of the general needs of the hive, are performed without fail.

Despite having the greatest numbers in the world, ants also exhibit an order which can serve as an example to human beings in many areas: technology, collective labour, military strategy, an advanced communications network, a hierarchical order, discipline and flawless town planning. Ants live in societies known as colonies and in such order amongst themselves that one could even say that they have a civilisation similar to that of human beings.

As ants produce and store their food, they also watch over their young, defend the colony and wage war against their enemies. There are even colonies which engage in "sewing," "agriculture" and "animal rearing." These animals have a very powerful communications network amongst themselves. Their social organisation and expertise are far superior to any other living thing. (See Harun Yahya, *The Miracle in the Ant*, Goodword Books, 2002)



Communal animals with ordered lives also operate together in the face of danger. For instance, when birds of prey such as hawks or owls enter the area, smaller birds surround these birds en masse. They then produce a special sound to draw other birds to the area. The aggressive behaviour displayed by small birds en masse generally drives birds of prey away.[156]

A flock of birds flying together protects all its members in the same way. For instance, a flock of starlings flying together leave a wide distance between one another. When they see a hawk, however, they close the distance between them. They thus make it harder for the hawk to dive in amidst the flock. Even if the hawk does so, it will be acting to its own detriment. Its wings will be damaged and it will be unable to hunt.[157] Mammals also act in consort when there is an attack on the group. For example, zebras take their young into the middle of the herd when they flee from enemies. Dolphins also swim in groups and fight off their greatest enemy, sharks, as a group.[158]

There are countless examples of and a great many details concerning the social lives of animals. These facts acquired about animals are the result of long years of research. As we have seen, the information about animals given in the Qur'an-as in all areas-shows that the book of Islam is indeed the word of Allah.



BIOMIMETICS: DRAWING INSPIRATION FROM THE DESIGN IN LIVING THINGS

***There is instruction for you in cattle*. From the contents of their bellies, from between the dung and blood, We give you pure milk to drink, easy for drinkers to swallow. (Qur'an, 16:66)**

***And there is certainly a lesson for you in your livestock*. We give you to drink from what is in their bellies and there are many ways in which you benefit from them, and some of them you eat; and you are conveyed on them and on ships as well. (Qur'an, 23:21-22)**

Before scientists and research and development experts embark on new projects, they usually look for models in living things and imitate their systems and designs. In other words, they see and study the designs created in nature by Allah and, inspired by these, go on to develop their own new technologies.

This approach has given birth to biometrics, a new branch of science that seeks to imitate living things. In recent times, this branch of science has come to be widely applied in the world of technology. The use of the word "*ibrah*," (to learn from, advice, importance, important thing, or model) in the above verses is most wise in this regard.

Biomimetics refers to all of the substances, equipment, mechanisms, and systems that people produce in order to imitate the systems present in nature. The scientific community currently feels a great need for the use of such equipment, particularly in the fields of nanotechnology, robot technology, artificial intelligence, medicine, and the military.

Biomimicry was first put forward by Janine M. Benyus, a writer and scientific observer from Montana. This concept was later analysed by many other people and began to find applications. Some of the com-

ments made regarding biomimicry are as follows:

> The theme of "biomimicry" is that we have much to learn from the natural world, as model, measure, and mentor. What these researchers have in common is a reverence for natural designs, and the inspiration to use them to solve human problems.[159]

David Oakey, product strategist for Interface Inc., a company that uses nature to increasing product quality and productivity, says:

> Nature is my mentor for business and design, a model for the way of life. Nature's system has worked for millions of years … Biomimicry is a way of learning from nature.[160]

Scientists who began to favour this rapidly spreading idea accelerated their studies by using nature's incomparable and flawless designs as models. These designs represent models for technological research, for they provide the maximum productivity for the least amount of materials and energy, and are self-maintaining, environmentally friendly, silent, aesthetically attractive, resistant, and long-lasting. *The High Country News* described biomimetics as "a scientific movement" and made the following comment:

> By using natural systems as models, we can create technologies that are more sustainable than those in use today.[161]



Janine M. Benyus, who believed that models in nature should be imitated, gave the following examples in her book, *Biomimicry: Innovation Inspired by Nature* (Perennial: 2002):

◆ Hummingbirds cross the Gulf of Mexico on less than 3 grams (one tenth of an ounce) of fuel,

◆ Dragonflies outmanoeuvre our best helicopters,

◆ Heating and air-conditioning systems in termite mounds are superior in terms of equipment and energy consumption to those made by human beings,

◆ A bat's high-frequency transmitter is more efficient and sensitive than our own radar systems,

◆ Light-emitting algae combine various chemicals to illuminate their bodies,

◆ Arctic fish and frogs freeze solid and then spring to life, having protected their organs from ice damage,

◆ Chameleons and cuttlefish change the pattern of their skin to blend instantly with their surroundings,

◆ Bees, turtles, and birds navigate without maps, and



◆ Whales and penguins dive without scuba gear.

These astonishing mechanisms and designs in nature, of which we have cited only a few, have the potential to enrich technology in a wide range of fields. This potential is becoming ever more obvious as our accumulated knowledge and technological means increase.

All animals possess many features that amaze human beings. Some have the ideal hydrodynamic shape that allows them to move through water, and others employ senses that appear very foreign to us. Most of these are features that researchers have encountered for the first time, or, rather, that they have only recently discovered. On occasion, it is necessary to bring together prominent scientists from such fields as computer technology, mechanical engineering, electronics, mathematics, physics, chemistry, and biology in order to imitate just one feature of a living thing.

Scientists are amazed when confronted with the incomparable structures and systems they are discovering with every passing day, and use that amazement to inspire themselves to produce new technologies for humanity's benefit. Realising that the existing perfect systems and extraordinary techniques applied in nature are far superior to their own knowledge and intellect, they became aware of these matchless solutions to existing problems and are now resorting to the designs in nature to resolve problems that have eluded them for years. As a result, they will perhaps achieve success in a very short time. Moreover, by imitating nature, scientists are making very important gains with regard to time and labour and also to the targeted use of material resources.

Today we see the developing technology gradually discovering the miracles of creation and using the extraordinary designs in living things, as in the case of biomimetics, in the service of humanity. Benyus has stated that "'Doing it nature's way' has the potential to change the way we grow food, make materials, harness energy, heal ourselves, store information, and conduct business."[162] The following are just a

few of the many scientific papers to have considered such subjects:

"Science is Imitating Nature,"[163]

"Life's Lessons in Design,"[164]

"Biomimicry: Secrets Hiding in Plain Sight,"[165]

"Biomimicry: Innovation Inspired by Nature,"[166]

"Biomimicry: Genius That Surrounds Us,"[167]

"Biomimetics: Creating Materials from Nature's Blueprints,"[168] and

"Engineers Ask Nature for Design Advice."[169]

In the nineteenth century, nature was imitated only in aesthetic terms. Artists and architects of that time were influenced by nature and used examples of the structures' external appearances in their works. Yet the realisation of nature's extraordinary designs and that these could be used to benefit human beings only began in the twentieth century with the study of natural mechanisms at the molecular level. Scientists today are learning from living things, as revealed in the Qur'an 1,400 years ago. (See Harun Yahya, *Biomimetics: Technology Imitates Nature*)

LOCUSTS MOVING IN SWARMS

They will emerge from their graves with downcast eyes, *like swarming locusts*. (Qur'an, 54:7)

This verse describes all people's situation in the Hereafter as one resembling swarming locusts. There is great wisdom in this simile.

A great deal of information was obtained about locusts in the twentieth century by conducting wide-ranging studies using micro-cameras. Locust swarms contain huge numbers of individual locusts that behave as a single body. Coming together in swarms that are kilometres long and wide, they look just like a dark cloud. It has been established, for instance, that a single swarm of desert locusts can cover 1,200 square kilometres (460 square miles) and contain between 40 and 80 million locusts per square kilometre.[170]

In addition, they deposit their eggs in sandy soils like seeds and, after the larvae have remained underground for a long period of time, they all emerge together. After digging a 10-15 cm (4-6 inch) long tunnel in the ground, a female locust lays 95-158 eggs at once. Females can lay eggs at least three times in their lifetime. When the larvae have matured after 10-65 days, depending on the air temperature, they emerge in a large group. Up to 1,000 egg pods have been found in one square metre. Locust swarms are large enough to cover several hundred square kilometres, with the number of adult locusts per square kilometre varying from between 40 to 80 million.[171] Their long underground existence and sudden emergence in vast numbers all at the same time may resemble the resurrection of human beings on the Day of Judgement. (Allah knows best.)

Today, locusts are being studied by special units, which employ remote control imaging systems. Even NASA satellite data are used to identify areas in Africa where desert locust colonies have developed.

Thanks to satellite data, it is possible to carry out wide-ranging research on land and in space over an 18 million square kilometre area.

As we have seen, the fact that the Qur'an made such a comparison at a time when these technologies did not exist is one of the proofs that it is the revelation of the Omniscient Allah.

ANT COMMUNICATION

The Qur'an indicates, when recounting Prophet Sulayman's (as) life, that ants have a communication system:

Then, when they reached the Valley of the Ants, an ant said: "Ants! Enter your dwellings, so that Sulayman and his troops do not crush you unwittingly." (Qur'an, 27: 18)

Scientific research into ants has revealed that these tiny animals have very organised social lives and that, as a requirement of that organisation, they also have a very complex communication network. For example, *National Geographic* reports that:

Huge and tiny, an ant carries in her head multiple sensory organs to pick up chemical and visual signals vital to colonies that may contain a million or more workers, all of which are female. The brain contains half a million nerve cells; eyes are compound; antennae act as nose and fingertips. Projections below the mouth sense taste; hairs respond to touch.[172]

Even if we are not aware of it, ants use a variety of methods to communicate, thanks to their very sensitive sensory organs. They use these organs at all times, from finding prey to following one another, and from building their nests to waging war. With 500,000 nerve cells squeezed into their 2-3 mm bodies, they possess a communications system that astonishes human beings.

The reactions in their communications have been divided into several specific categories: alarm, recruitment, grooming, exchange of oral and anal liquid, group effect, recognition, caste determination…[173] Ants, which establish an ordered society by means of these reactions, live a life based on the mutual exchange of information. To bring about this exchange, they sometimes exhibit more flawless communication in areas that human beings often cannot resolve through speech, such as coming together, sharing, cleaning, and defence.

Ants mainly communicate on the chemical level. These semio-chemicals, known as pheromones, are chemical compounds that are perceived by smell and secreted by internal glands. In addition, they play the most important role in organising ant societies. When an ant secretes a pheromone, the other ants receive it by means of smell or taste and duly respond. Research into ant pheromones has revealed that all signals are emitted according to the needs of the colony. Moreover, the intensity of the pheromone emitted also varies according to the urgency of the situation at hand.[174]

As we have seen, ants require a profound knowledge of chemistry to do what they do. The fact that the Qur'an emphasized this fact 1,400 years ago, a time when there was no such knowledge about ants, is another one of its scientific miracles. (See Harun Yahya, *The Miracle in the Ant*, Goodword Books, New Delhi, 2002)

THE FOOD CYCLE

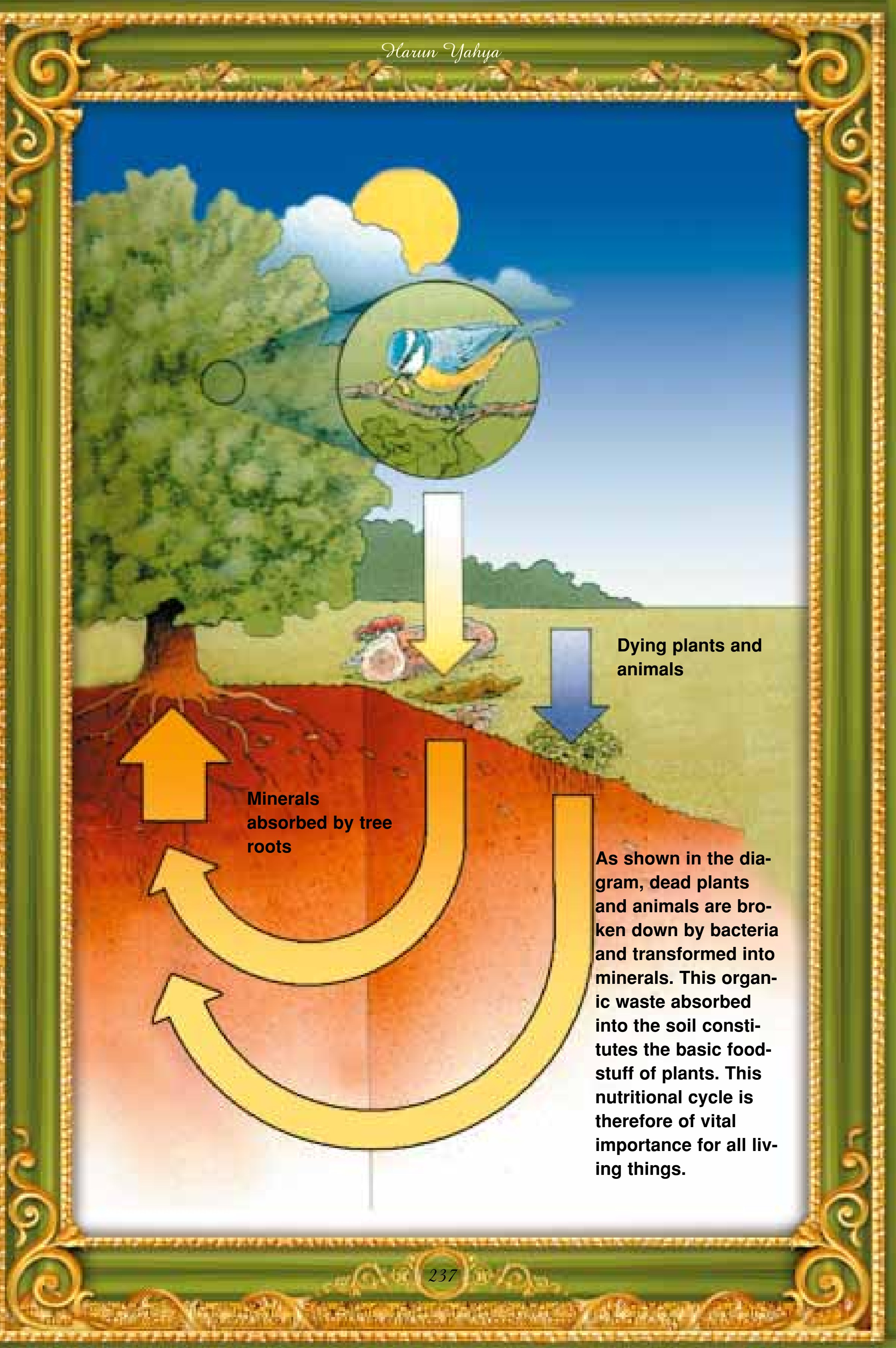
***Allah splits the seed and kernel. He brings forth the living from the dead, and produces the dead out of the living*. That is Allah, so how are you misguided? (Qur'an, 6:95)**

In the above verse, our attention is drawn to a food cycle of which people at the time of the Qur'an's revelation could have known nothing.

When a living thing dies, micro-organisms quickly cause it to decompose. The dead body is thus divided up into organic molecules that mix with the soil and form the basic source of food for plants, animals, and, ultimately, humanity. Were it not for this nutritional cycle, life would not be possible.

Bacteria are responsible for meeting all living things' mineral and food needs. Plants and some animals, which remain almost dead (hibernation) throughout the winter, revive in the summer and meet all of their mineral and food requirements through the activities of bacteria during the winter. Throughout the winter, bacteria separate organic wastes (i.e., dead plants and animals) and turn them into minerals.[175] Thus, when living things reawaken in spring, they find food ready and waiting for them. Thanks to bacteria, a "spring cleaning" has been carried out in their environment and the necessary amount of food has been prepared for nature as it returns to life in the spring.

As we have seen, dead creatures play a vital role in the emergence of new ones. This transition, indicated in the Qur'an as "**He brings forth the living from the dead, and produces the dead out of the living**," is carried out in the most perfect manner. This is one of the proofs that the Qur'an is the word of Allah.



As shown in the diagram, dead plants and animals are broken down by bacteria and transformed into minerals. This organic waste absorbed into the soil constitutes the basic foodstuff of plants. This nutritional cycle is therefore of vital importance for all living things.

THE EARS ARE ACTIVE DURING SLEEP

***So We sealed their ears* [*with sleep*] in the cave for a number of years. (Qur'an, 18:11)**

The original Arabic of the phrase "**We sealed their ears**" in the Qur'an is the verb *daraba*. This bears the metaphorical meaning of "We have made them sleep." Used in reference to the ears, *daraba* means "preventing the ears from hearing." The fact that only the sense of hearing is mentioned here is very significant.

According to recent scientific discoveries, the ear is the only sensory organ active while a person is sleeping. This is why we need an alarm clock to wake up.[176] The wisdom of the phrase "**We sealed their ears**" is, in all probability, that Allah closed the hearing of the young people in question, for which reason they remained asleep for many years.



THE IMPORTANCE OF MOVEMENT IN SLEEP

You would have supposed them to be awake, whereas in fact they were asleep. ***We moved them to the right and to the left,*** **and, at the entrance, their dog stretched out its paws. If you had looked down and seen them, you would have turned from them and run, and have been filled with terror at the sight of them. (Qur'an, 18:18)**

The above verse refers to the Companions of the Cave, who remained asleep for hundreds of years. In addition, Allah also reveals that He moved their bodies to the left and right. The wisdom of this was only discovered in recent times.

People who remain lying down in the same position for long period of time encounter serious health problems, such as circulation difficulties, sores, and blood clotting in that part of the body in contact with the surface on which they lie.[177]

The resulting sores are known as "bed sores" or "pressure sores." Due to the constant pressure on one part of the body when one is not moving for a long period of time, the blood vessels become constricted and can close altogether. As a result, the oxygen and other nutrients carried by the blood fail to reach the skin, and the skin begins to die. This leads to the appearance of sores on the body. Unless these sores are treated, fat and muscles can also die.[178]

These sores, which form under the skin or tissue, can assume serious dimensions unless treated. If they become infected, they can even lead to death. The healthiest thing to do, therefore, is to change the position of the body every 15 minutes in order to reduce this pressure. Patients who cannot move themselves therefore receive special care and are moved every 2 hours by other people.[179] The fact that these medical facts, only discovered in the last century, are referred to in the Qur'an is yet another of its miracles.

REDUCED MOVEMENT AT NIGHT

He splits the sky at dawn, and *appoints the night as a time of stillness* and the Sun and Moon as a means of reckoning... (Qur'an, 6:96)

The Arabic word *sakan*, which appears in the original of the above verse, means "repose, rest, time to withdraw to rest, time for a break." As indicated by Allah, night is the time when human beings rest. The hormone melatonin, secreted at night, prepares the body for sleep by slowing down peoples' physical movements, making them sleepy and tired, and functioning as a natural tranquilliser that eases their minds.[180] During sleep, heartbeat and respiration rhythms slow down and blood pressure falls. In the morning, the production of the hormones stops and the body is stimulated to awaken.[181]

At the same time, sleep allows the body's muscles and tissues to repair themselves and the body to replace old or dead cells. Since energy expenditure is reduced during sleep, the body stores energy throughout the night. Several chemicals vital for the immune system and growth hormones are also secreted during sleep.[182]

In the event that people fail to get enough sleep, therefore, the immune system is immediately affected and the body becomes more susceptible to sickness. If people are unable to sleep for two nights, they will find it harder to concentrate and their error levels will rise. If they are deprived of sleep for three nights, they will begin to hallucinate and be unable to think logically.[183]

Night is as much a time for rest for other living things as it is for human beings. This situation, referred to by Allah in the verse "**the night as a time of stillness,**" indicates a fact that cannot be observed by the naked eye: Many activities that take place during the day slow down and rest during the night. In plants, for instance, perspiration in leaves and photosynthesis begin to rise when the Sun rises. In the afternoon, the situation is reversed. In other words, photosynthesis slows

down and respiration increases since perspiration is accelerated as the temperature rises. At night time, as the temperature falls, perspiration slows down and the plant rests. Most plants would die if just one night failed to take place. From that point of view, night means rest and reinvigoration for plants, just as it does for human beings.[184]

Movement at the molecular level also declines at night. The radiation emitted by the Sun during the day activates the atoms and molecules in Earth's atmosphere and causes them to achieve higher energy levels. As darkness falls, the atoms and molecules fall to lower energy levels and start to give off radiation.[185]

These facts are, in all probability, indicated in Surat al-An'am 96 and reveal yet another of the Qur'an's countless miracles. (Allah knows best.)

CHEST CONTRACTION WITH INCREASING HEIGHT

Human beings need oxygen and air pressure in order to live. Breathing is made possible by the oxygen in the atmosphere reaching the air sacs in our lungs. As elevation rises, however, atmospheric pressure goes down as the atmosphere becomes thinner. Therefore, the amount of oxygen entering the blood stream declines and it becomes harder to breathe. As the air sacs grow narrow and contract, we feel as if we cannot breathe.

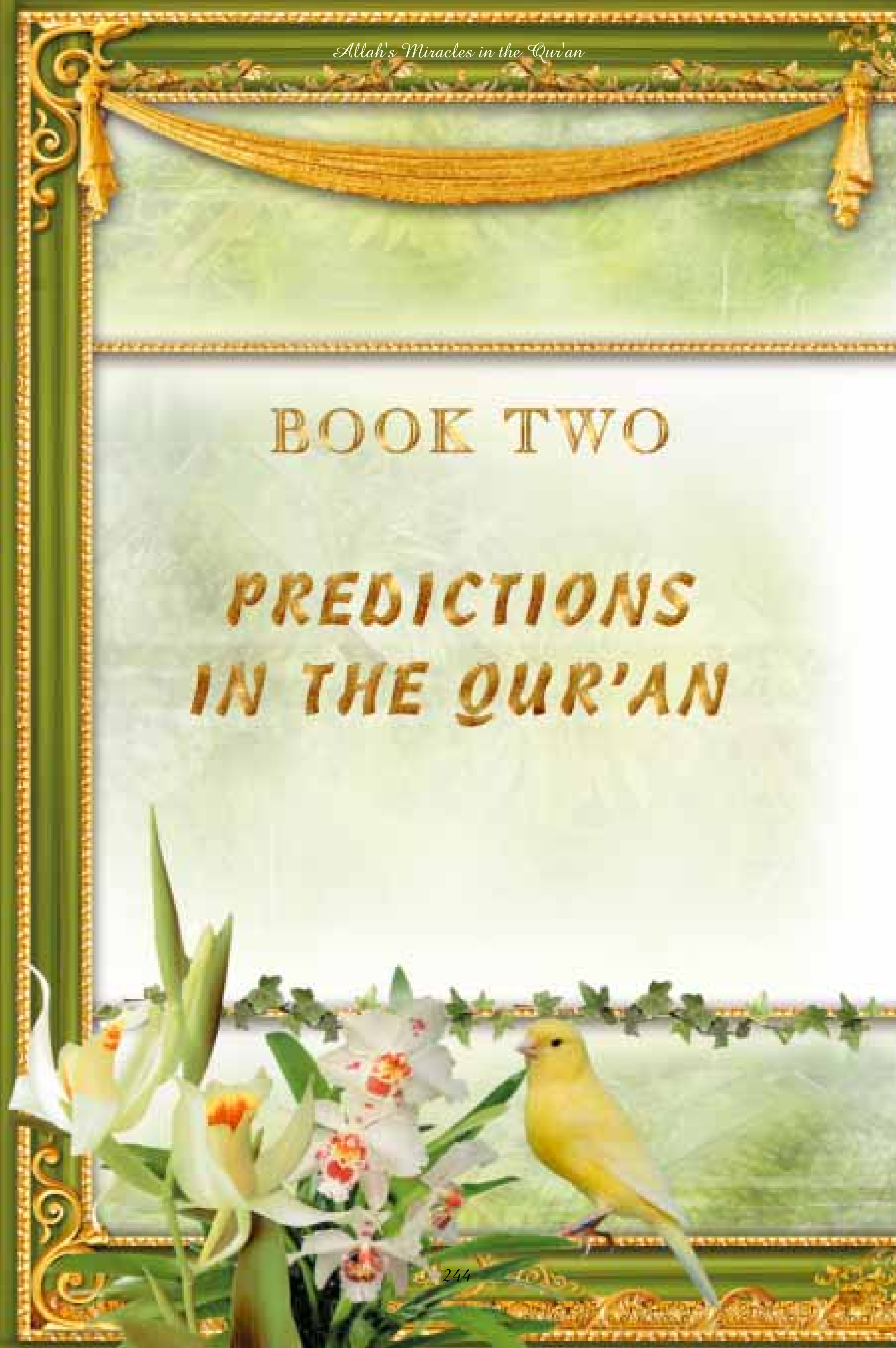
If the amount of oxygen in the blood is less than the body needs, several symptoms emerge: extreme fatigue, headaches, dizziness, nausea, and loss of judgement. When a certain height is reached, it finally becomes impossible for a human being to breathe at all.[186] This is why we need oxygen bottles and special clothing in order to survive at such elevations.

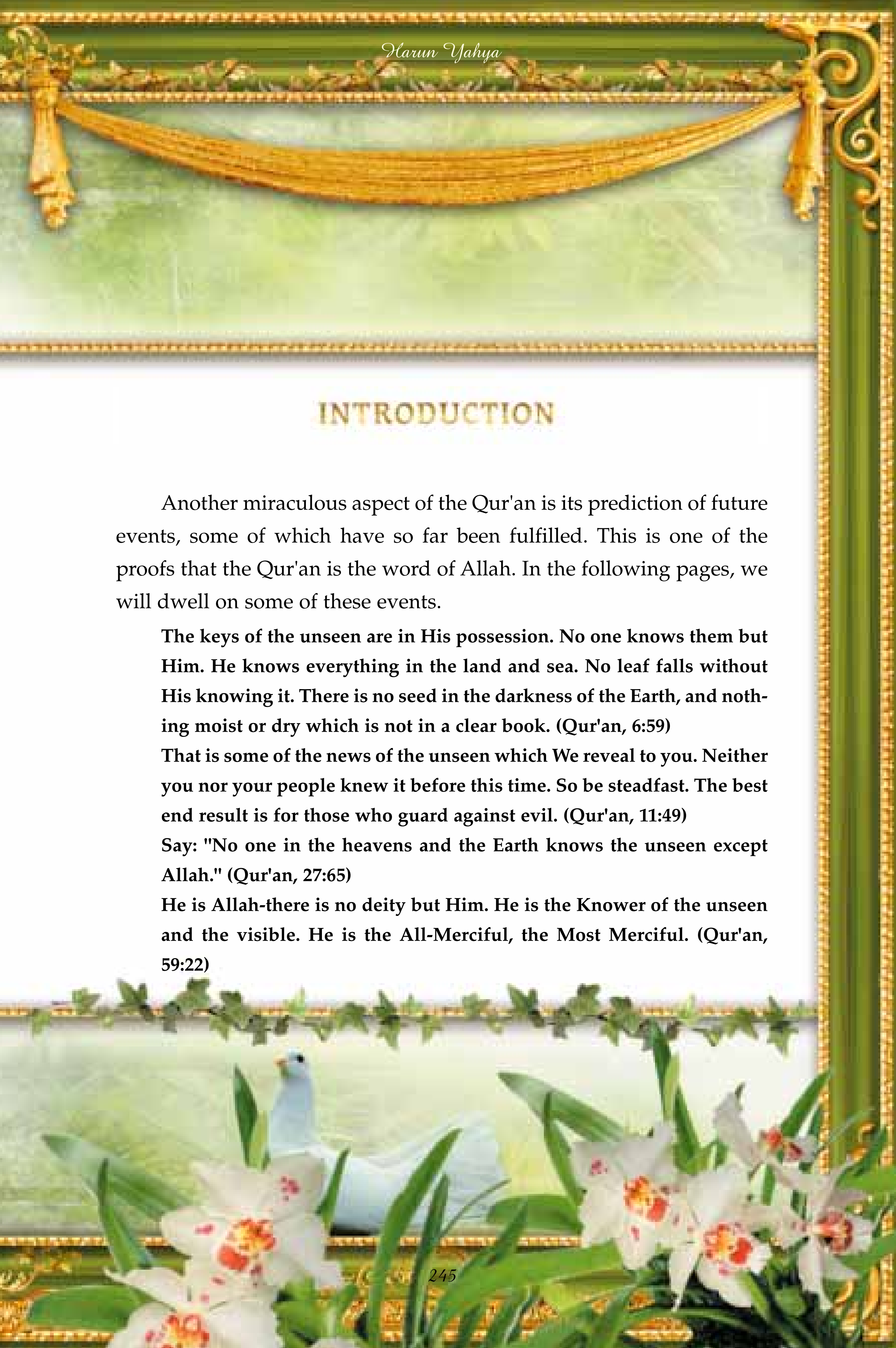
Someone at 5,000-7,500 metres (16,500-24,500 feet) above sea-level may faint and go into a coma because of breathing difficulties. That explains the presence of oxygen equipment in airplanes. There are also special systems that regulate air pressure when planes fly at 9,000-10,000 metres (29,500-33,000 feet) above sea-level.

Anoxia occurs when oxygen fails to reach the tissues. This oxygen deficiency occurs at heights of 3,000-4,500 metres (10,000-15,000 feet). Some people even lose consciousness at such elevations, but can be saved by immediate oxygen treatment.

In the comparison made in the verse below, this physical truth, the changes that take place in the chest with increasing height, is indicated in these terms:

> **When Allah desires to guide someone, He expands his breast to Islam. When He desires to misguide someone,** ***He makes his breast narrow and constricted as if he were climbing up into the sky.*** **That is how Allah defiles those who have no faith. (Qur'an, 6:125)**


BOOK TWO
PREDICTIONS
IN THE QUR'AN



INTRODUCTION

Another miraculous aspect of the Qur'an is its prediction of future events, some of which have so far been fulfilled. This is one of the proofs that the Qur'an is the word of Allah. In the following pages, we will dwell on some of these events.

The keys of the unseen are in His possession. No one knows them but Him. He knows everything in the land and sea. No leaf falls without His knowing it. There is no seed in the darkness of the Earth, and nothing moist or dry which is not in a clear book. (Qur'an, 6:59)

That is some of the news of the unseen which We reveal to you. Neither you nor your people knew it before this time. So be steadfast. The best end result is for those who guard against evil. (Qur'an, 11:49)

Say: "No one in the heavens and the Earth knows the unseen except Allah." (Qur'an, 27:65)

He is Allah-there is no deity but Him. He is the Knower of the unseen and the visible. He is the All-Merciful, the Most Merciful. (Qur'an, 59:22)

BYZANTINE EMPIRE'S VICTORY

An astonishing prediction is found in the first verses of Surat ar-Rum, which refers to the Byzantine Empire, the eastern part of the later Roman Empire: The Byzantine Empire, which had met with a great defeat, would soon gain victory.

> **Alif, Lam, Mim.** ***The Romans have been defeated in the lowest land, but after their defeat they will be victorious within three to nine years.*** **The affair is Allah's from beginning to end. On that day, the believers will rejoice. (Qur'an, 30:1-4)**

These verses were revealed around 620, almost 7 years after the idolatrous Persians had severely defeated Christian Byzantium in 613-



14. In fact, Byzantium had suffered such heavy losses that it seemed impossible for it even to survive, let alone be victorious again. Following their defeat of the Byzantines at Antioch in 613, the Persians seized control of Damascus, Cilicia, Tarsus, Armenia, and Jerusalem. The loss of Jerusalem in 614 was particularly traumatic for the Byzantines, for the Church of the Holy Sepulchre was destroyed and the Persians seized the "True Cross," the symbol of Christianity.[187]

In addition, the Avars, Slavs, and Lombards also were posing serious threats to the Byzantine Empire. The Avars had reached as far as the walls of Constantinople. Emperor Heraclius ordered the gold and silver in churches to be melted and turned into money in order to meet the army's expenses. When this proved insufficient, bronze statues were melted down in order to mint more money. Many governors had



revolted against Heraclius, and Byzantium was on the point of collapse.[188] Mesopotamia, Cilicia, Syria, Palestine, Egypt and Armenia, which had earlier belonged to Byzantium, were invaded by the idolatrous Persians.[189]

In short, everyone was expecting Byzantium to be destroyed. But during this time, the first verses of Surat ar-Rum were revealed, announcing that Byzantium would triumph in 3 to 9 years. This predicted victory seemed so impossible that the Arab polytheists thought it would never come true.

Like all the other predictions in the Qur'an, however, this one also came true. In 622, Heraclius gained a number of victories over the Persians and conquered Armenia.[190] In December 627, the two empires fought a decisive battle at Nineveh, some 50 kilometres (31 miles) east of the Tigris river, near Baghdad. This time too, the Byzantine army defeated the Persians. A few months later, the Persians had to sue for peace with Byzantium, which obliged them to return the territories they had taken from it.[191]

The Byzantine victory was completed when Emperor Heraclius defeated the Persian ruler Khosrow II in 630, recaptured Jerusalem, and regained the "True Cross" for the Church of the Holy Sepulchre.[192]

In the end, "the victory of the Romans" proclaimed by Allah in the Qur'an miraculously came true within the verses' stated "three to nine years" time frame.

Another miracle revealed in these verses is the announcement of a geographical fact that could not have been known by anyone at that time: that the Romans had been defeated in the lowest region of Earth. This Arabic expression *adnaa al-ard* is interpreted as "a nearby place" in many translations. However, this is not the literal meaning, but rather a figurative interpretation. The word *adnaa*, derived from the word *dani'* (low), means "the lowest." The word *ard* means "the world." Therefore, *adnaa al-ard* means "the lowest place on Earth."

Some interpreters of the Qur'an, considering the closeness of the

region in question to the Arabs, prefer the "closest" meaning of the word. However, the actual meaning indicates a very important geological fact: The Dead Sea basin, one of the regions in which the Byzantines were defeated in 613-14, is the lowest region on Earth.[193]

As stated earlier, for Christian Byzantium, the loss of the True Cross was the heaviest blow in that defeat in Jerusalem, located near the shores of the Dead Sea.

The Byzantines and the Persians actually fought at the Dead Sea basin, which is situated at the intersection point of the lands belonging to Syria, Palestine, and Jordan. At 399 meters below sea level, the Dead Sea is the "lowest" place on Earth's surface.[194]

However, as only modern measuring methods and equipment can prove this fact, it would have been impossible for anyone living at that time to realise this truth. Yet, the Qur'an states clearly that this region was the "**lowest land**" on Earth and thereby provides further evidence that it is the word of Allah.

This picture shows Jerusalem and the Dead Sea basin.



THE PRESERVATION OF PHARAOH'S BODY

As we shall see later on, Pharaoh regarded himself as a deity and responded with slanders and threats to Prophet Musa's (as) calls for him to believe in Allah. This arrogant attitude lasted until he was faced with the threat of death through drowning. The Qur'an relates that Pharaoh immediately turned to belief when faced with Allah's punishment:

We brought the tribe of Israel across the sea, and Pharaoh and his troops pursued them out of tyranny and enmity. Then, when he was on the point of drowning, he [Pharaoh] said: "I believe that there is no deity but Him in Whom the tribe of Israel believes. I am one of the Muslims." (Qur'an, 10:90)

However, this last-minute conversion was not accepted, for it was not sincere. According to the Qur'an, Allah exclaimed:

"What, now! When previously you rebelled and were one of the corrupters? *Today we will preserve your body so you can be a sign for people who come after you.* Surely many people are heedless of Our signs." (Qur'an, 10:91-92)

The information that Pharaoh's corpse would serve as a sign for later generations may be regarded as an indication that his body would not decay. On display in the Royal Mummies Chamber of the Egyptian Museum in Cairo is a mummified body believed to be that of this tyrant. In all likelihood, Pharaoh's body floated to shore after being drowned, was found and mummified by the Egyptians, and then carried to a previously prepared burial chamber.[195]

THE CONQUEST OF MAKKAH

Allah has confirmed His Messenger's vision with truth: You will enter the Masjid al-Haram [Sacred Mosque] in safety, Allah willing, shaving your heads and cutting your hair without any fear. He knew what you did not know and ordained, in place of this, an imminent victory. (Qur'an, 48:27)

One night in Madinah, the Prophet (saas) dreamed that the believers would enter the Sacred Mosque and walk around the Ka`bah. After he awoke, he gave this good news to the believers, for those who had migrated from Makkah to Madinah with him had not been able to return since.

In Surat al-Fath 27, Allah revealed to the Prophet (saas) that He would help and support him, that the dream was true, and that the believers would enter Makkah. A short while later, with the Treaty of Hudaybiyah and the conquest of Makkah, the believers entered the Sacred Mosque in complete safety, just as the dream had foretold. That was how Allah showed that it had been His will that the Prophet's (saas) dream be fulfilled.

On closer consideration, this verse can be seen to announce yet another victory that will take place before Makkah's capture: the capture of the Khyber Fortress, which was under the control of the Jews, before they entered Makkah.[196]

Other verses that give the glad tidings of Makkah's conquest are given below:

***He held their hands back from you, and your hands from them in the valley of Makkah, after giving you the upper hand over them.* Allah sees what you do. (Qur'an, 48:24)**

Truly *We have granted you a clear victory*, so that Allah may forgive you your earlier errors and any later ones, complete His blessing upon you, and guide you on a straight path. And so that Allah may help you with a mighty help. (Qur'an, 48:1-3)

Surat al-Isra' 76 states that the unbelievers cannot stay in Makkah:

They were very near to scaring you from the land with the object of expelling you from it. But had they done so, *they would only have remained there a short time after you.* (Qur'an, 17:76)

The Prophet (saas) entered Makkah and conquered it in 8 AH (630). Two years later, all of the unbelievers left Makkah, just as Allah had said that they would. Another point that should be noted here is that when the Prophet (saas) gave that good news to the believers, it looked totally out of the question. In fact, the situation pointed in quite the opposite direction, and the polytheists appeared quite determined never to let the believers enter Makkah. As a result, those who had doubts in their hearts began to doubt the Prophet's (saas) words. Yet, the Prophet (saas) trusted in Allah, paid no attention to the doubters' words, and told people what Allah had revealed to him. The Qur'an confirmed his words, and the prediction was fulfilled shortly afterwards.



THE TRIBE OF ISRAEL WILL BECOME VERY HAUGHTY

We decreed in the Book for the tribe of Israel: "*You will twice cause corruption on Earth and you will reach [a degree of] great haughtiness.* When the promised first time came, We sent against you servants of Ours possessing great force, and they ransacked your houses, rampaging right through them. It was a promise that was fulfilled. Then once again We gave you the upper hand over them, supplied you with more wealth and children, and made you the most numerous group." (Qur'an, 17:4-6)

As these verses reveal, the Children of Israel were to cause two corruptions over the world. After the first one, during which they adopted a very high level of haughtiness, Allah sent a powerful army against them. Indeed, when the Jews killed Prophet Yahya (as) and set a trap to kill Prophet 'Isa (as) ("reaching to a degree of great haughtiness"), they were exiled shortly afterwards from Jerusalem by the Romans in 70 and wandered all over the world.

When that verse was revealed to the Prophet (saas), the Jews were living under very difficult conditions in various countries and had no state of their own. Yet, Allah told the Children of Israel that one day they would recover their strength.

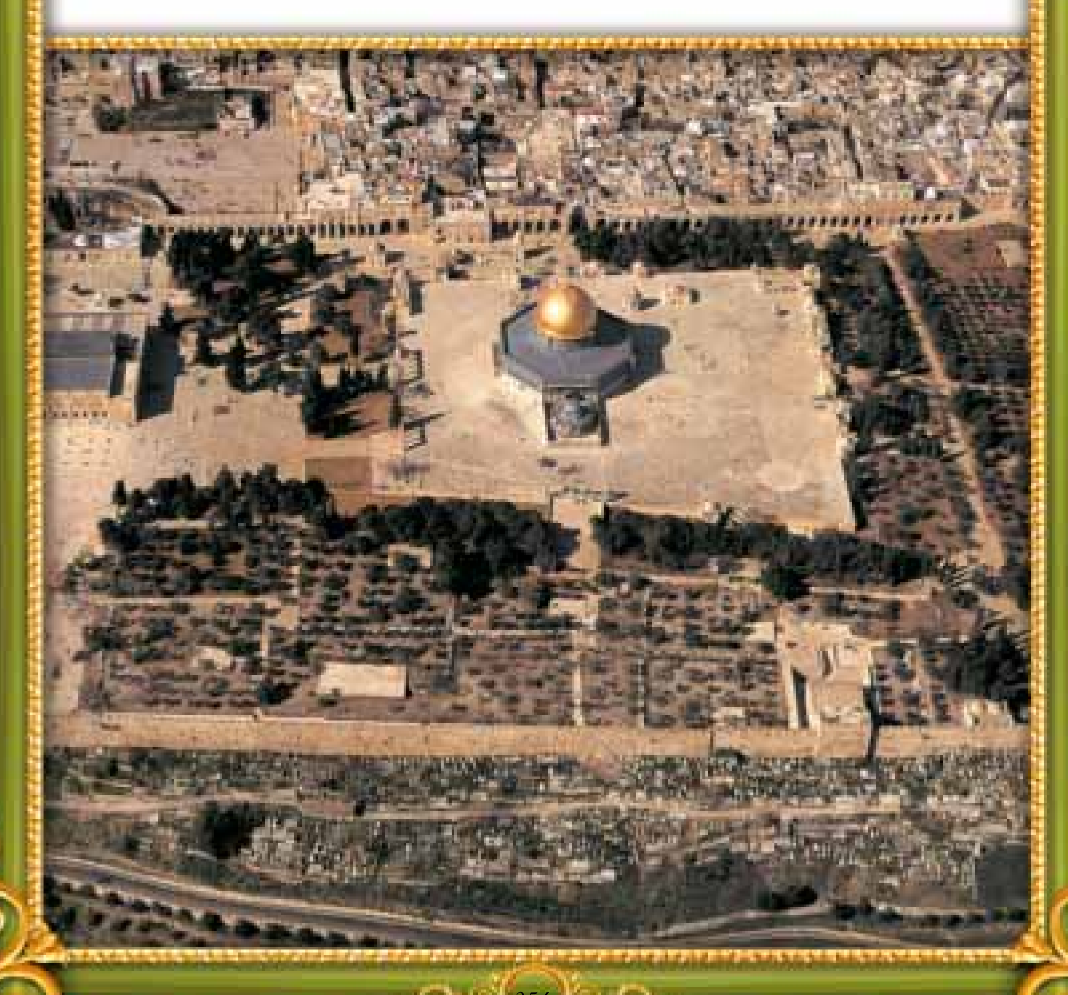
At that time, however, there seemed to be almost no chance that this would really happen. Many centuries later, however, the Jews returned to Palestine and established the State of Israel in 1948. Subsequently, the attitudes of some racist Zionists living in Israel led to disorder in the Middle East. Such attitudes are still laying the foundations of acts of terror.

This current state is a sign of the Children of Israel's second "corruption." However, it is important to note that this wicked behaviour certainly does not apply to all Jews, for many Jews are individuals of

good conscience and common sense who do not agree with such behaviour. Certain racist and radical Zionists need to **"take to forgiveness"** (Qur'an, 7:199), as recommended by our Lord. If they follow this path, then it is clear that, by Allah's will, an environment of peace and brotherhood can again be established, for the Qur'an states:

> **A good action and a bad action are not the same. Repel the bad with something better and, if there is enmity between you and someone else, he will be like a bosom friend. (Qur'an, 41:34)**

In these verses in the Surat al-Isra', we notice that almost no one could believe that such things would ever come about. But Allah willed their fulfilment, and thereby provided believers with more proof that the Qur'an is a miraculous book revealed by Him for their benefit.



THE EXPLORATION OF SPACE

Humanity's exploration of space was accelerated with the Soviet satellite Sputnik on 4 October 1957, which carried aloft the first man to ever leave Earth's atmosphere: Soviet cosmonaut Yuri Gagarin. On 20 July 1969, the American astronaut Neil Armstrong became the first human being ever to set foot on the Moon.

In fact, the Qur'an revealed that such developments and achievements would one day be realised. For instance, Allah draws our attention to this in the following verse:

O company of jinn and human beings! If you are able to pierce through the confines of the heavens and Earth, pierce through them. You will not pierce through, except with a clear authority. (Qur'an, 55:33)

The Arabic word *sultan*, translated here as "**a clear authority**," has other meanings as well: force, power, sovereignty, dominion, law, path, permission, give leave, justify, and proof.

Careful examination reveals that the above verse emphasizes that humanity will be able to move into the depths of Earth and sky, but only with a superior power. In all likelihood, this superior power is the superior technology employed in the twentieth century, for it enabled scientists to achieve this great feat.

THE VOYAGE TO THE MOON

And [I swear by] the *Moon* when it is full, *you will mount up stage by stage*! What is the matter with them, that they have no faith? (Qur'an, 84:18-20)

After referring to the Moon, the above verses then say that people will mount up stage by stage. The term *tarkabu* comes from the verb *rakiba*, (to mount, walk on a path, follow, embark upon, set about, participate, or rule). In the light of these meanings, it is very likely that the expression "**you will mount up stage by stage**" refers to a vehicle to be boarded.

Indeed, the astronauts' spacecraft pass through each layer of the atmosphere one by one, and then begin to pass through the Moon's gravitational field. Thus, the Moon is reached by moving through individual layers. In addition, the swearing by the Moon in Surat al-Inshiqaq 18 further strengthens this emphasis, meaning that the verse may well be a sign that humanity will travel to the Moon. (Allah knows best.)



MODERN MEANS OF TRANSPORT

> ***And horses, mules, and donkeys both to ride and for adornment. And He creates other things you do not know.* (Qur'an, 16:8)**

The above verse indicates that in addition to the animals mentioned here, people will have various unknown (to them) means of transport. The following verse points to the fact that there will be such mass modes of transport as ships:

> **A sign for them is that We carried their families in the laden ship. And *We have created for them the like of it, in which they sail.* (Qur'an, 36:41-42)**




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PLANE TECHNOLOGY

And to Sulayman We gave the fiercely blowing wind, speeding at his command toward the land that We had blessed. And We had full knowledge of everything. (Qur'an, 21:81)

As the above verse relates, Allah placed the wind under Prophet Sulayman's (as) command and allowed him to use it as a vehicle. There is a strong possibility of an indication here that, as in Prophet Sulayman's (as) time, wind energy will also be used in the technology of the future.

And We gave Sulayman ***power over the wind-a month's journey in the morning and a month in the afternoon...*** **(Qur'an, 34:12)**

The expression "**a month's journey in the morning and a month in the afternoon**" may be drawing attention to the fact that Prophet Sulayman (as) moved rapidly between different regions perhaps by using a technology similar to an airplane, or developed wind-powered vehicles that could cover long distances quickly. (Allah knows best.) There is thus a strong possibility that these verses point to modern airplane technology.



IMAGE TRANSMISSION

He who possessed knowledge of the Book said: *"I will bring it [the Queen of Saba's throne] to you before your glance returns to you."* And when he [Sulayman] saw it standing firmly in his presence, he said: "This is part of my Lord's favour, to test me to see if I will give thanks or show ingratitude..." (Qur'an, 27:40)

"He who possessed knowledge of the Book" told Prophet Sulayman (as) that he could bring the Queen of Saba's throne to him very quickly. This is a possible reference to the transmission of images with present-day advanced technology. Another verse on the subject reads:

A demon of the jinn said: *"I will bring it to you before you get up from your seat.* I am strong and trustworthy enough to do it." (Qur'an, 27:39)

In our day, text, pictures, and films can be sent anywhere in the world in a matter of seconds, thanks to the Internet and advances in computer technology. For instance, carrying the Queen's throne to Prophet Sulayman's (as) court very quickly may well refer to the fact that it will be possible to send a three-dimensional picture or image in the blink of an eye over the Internet.

According to scientists, the teleportation of atoms and molecules, as well as larger bodies, may become possible in the near future. By this method, the item's material characteristics are removed from one location and transferred in every detail and atomic sequence to another location, where they are reconstructed. If this technology becomes operational one day, time and space will no longer represent an obstacle to travel and objects will be able to be transported anywhere in a single moment without traversing any physical distance.[197]

In 1998, physicists at the California Institute of Technology (Caltech) working with two European groups transported a photon. The scientists formed a copy of the photon by reading its atomic struc-

ture and then transmitted that information a distance of 1 metre (3.28 feet). In another recent teleportation experiment, Ping Koy Lam of the Australian National University (ANU) and other researchers transmitted a laser ray a short distance.[198]

Indeed, according to a CNN report on 17 July 2002, a group of physicists from the National Australian University in Canberra split a laser ray and "transmitted" it several metres. Ping Koy Lam, the team's head, stated that they had not yet succeeded in transmitting matter in its atomic state, but that such a thing was not impossible and may become a reality in the future.

According to a study published in the science journal *Nature*, Eugene Polzik of Denmark's University of Aarhus, and his colleagues performed successful experiments on a large number of atoms, using laser rays and quantum physics.[199] In his analyses of teleportation's potential, published in the journal *Scientific American*, Australian physicist Anton Zeilinger states that far more complex systems could be teleported without violating the laws of physics.[200]

As the Qur'an reveals in "**We will show them Our signs on the horizon and within themselves until it is clear to them that it is the truth**" (Qur'an, 41:53), these scientific advances may represent a part of the technologies indicated in the Qur'an, all of which reveal its miraculous aspects.

SMELL TRANSFERENCE

He [Yusuf] said: "No blame at all will fall on you. Today you have forgiveness from Allah. He is the Most Merciful of the merciful. Go with this shirt of mine and cast it on my father's face, and he will see again. Then come to me with all your families." And when the caravan went on its way, their father said: "*I can smell Yusuf's scent!* You probably think I have become senile." (Qur'an, 12:92-94)

Today, scientists state that teleporting atoms and scent molecules may be possible in the near future. In Surah Yusuf 94, Prophet Yusuf's (as) father says that he can smell his son's scent. Scientists also say that it will soon be possible to send scents in the same way as pictures and three-dimensional images are sent. Therefore, this verse might be a sign of an advanced technology developing from the current research into transmitting scent.

Like our other sense perceptions, smell forms in the brain. For example, a lemon peel's molecules stimulate the nose's scent receptors, which then transmit them in the form of electrical signals to the brain for analysis. Therefore, when the scent's signal is artificially formed in another form, the scent can be perceived in the same form. Indeed, the "electronic nose" is one of the research areas showing that this may well be possible in the near future.

A human being's scent perception system makes it possible for a trained nose to name and distinguish some 10,000 odours. Professionals in the perfumery business who have received special chemical training are able to sniff a scent that contains 100 different odorants and then list the ingredients.[201] This superior creation in the human nose has encouraged many scientists to design similar equipment. Efforts are underway in various research and development centres to replicate this human scent perception system. The models developed on this basis are termed "the electronic nose."

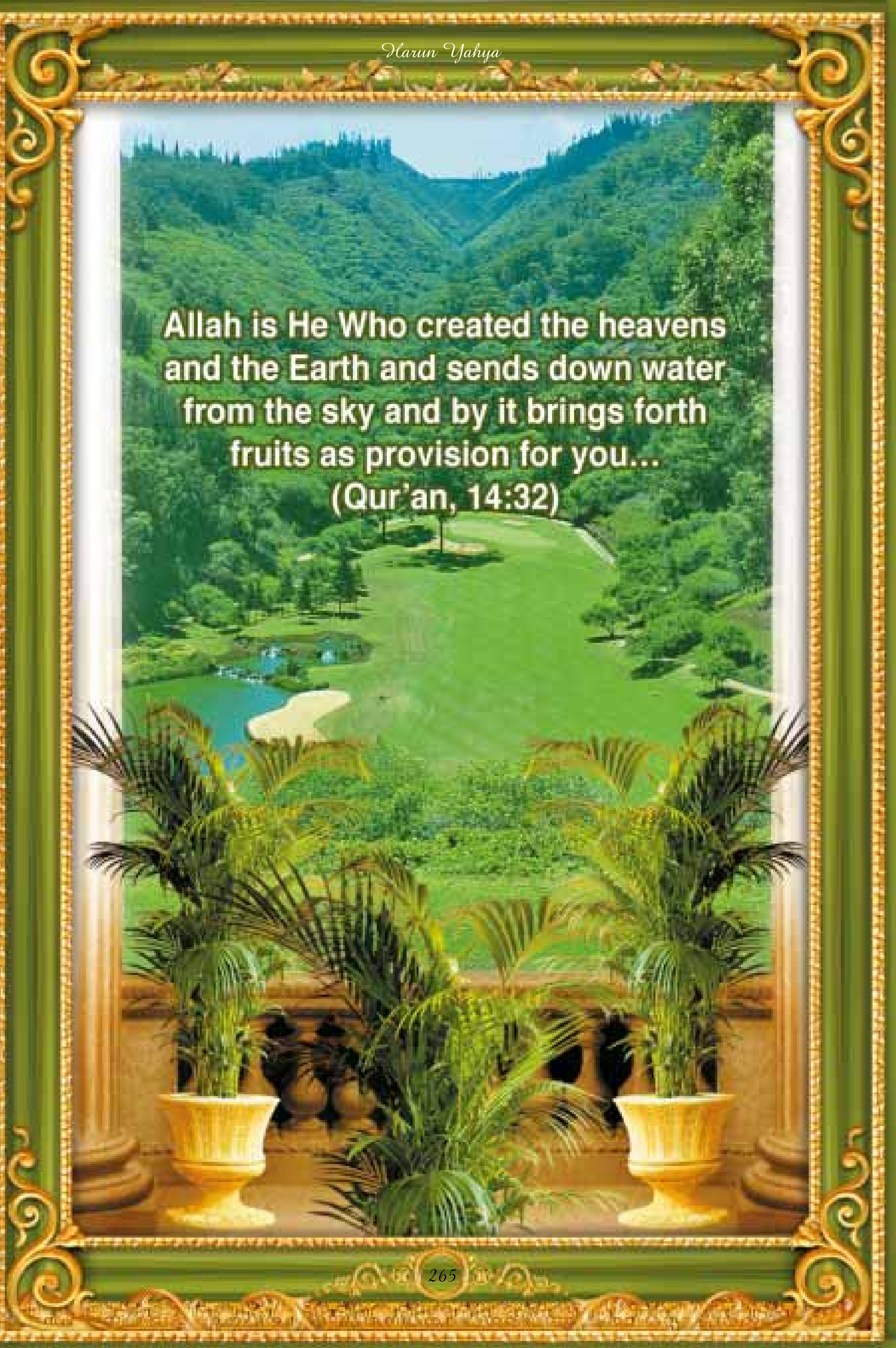
The human nose's receptors are composed of proteins; those in its electronic counterpart are composed of a series of chemical receptors. Each receptor is designed to detect different odours; the more their distinguishing capacities are enhanced, the more difficult production becomes and the greater the cost. The signals collected by the sensors are turned into binary codes, by means of electronic systems, and then sent to a computer. The electronic systems can be thought of as imitating the nerve cells responsible for scent detection, and the computer as the brain. The computer is programmed to analyse the data and thus interprets the binary code signals.

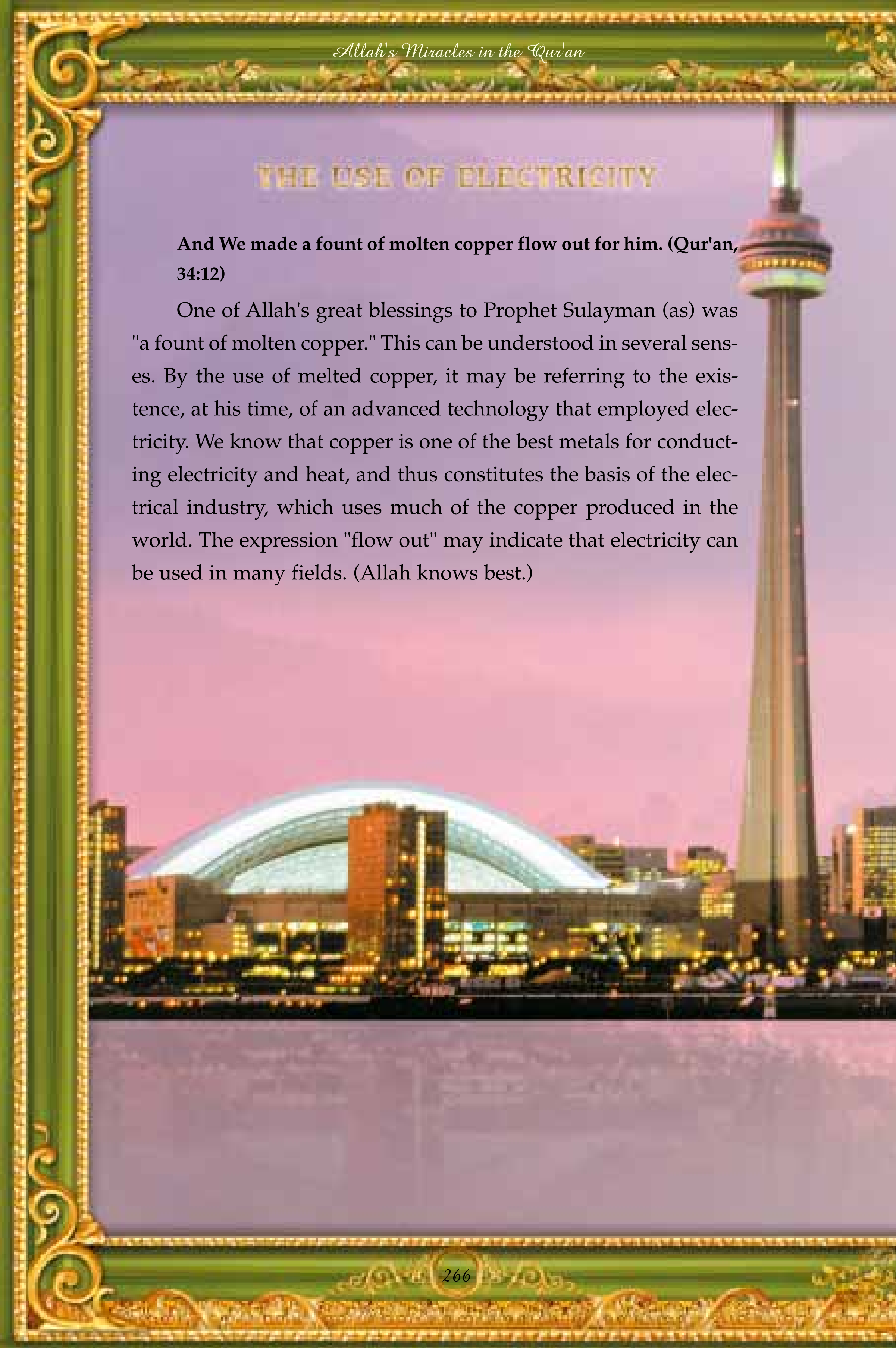
Electronic noses are currently being used in the food, perfumery, and chemical industries, as well as in medicine. Universities and international organizations are also providing major support for such projects. Nevertheless, as stated by Julian W. Gardner of the University of Warwick, researchers are still in the early stages of this technology.[202]

NASA researchers are developing an exquisitely sensitive artificial nose for space exploration. This device, which can be programmed to distinguish between almost any compound, is far more sensitive than a human nose. It will serve as part of an intelligent safety system, and will be able to detect hazardous substances in the space station.[203]



The apparatus USB-P@d, produced by the firm Duftspezialisten, permits personal computers to give off scents based on their users' preference. Thanks to this scent transmission apparatus, a drive can set up a computer-controlled air current. The scent comes from a changeable cartridge filled with 20 different types of oil. These computer-controlled scents can also provide appropriate sounds and images from nature.


Allah is He Who created the heavens
and the Earth and sends down water
from the sky and by it brings forth
fruits as provision for you...
(Qur'an, 14:32)



THE USE OF ELECTRICITY

And We made a fount of molten copper flow out for him. (Qur'an, 34:12)

One of Allah's great blessings to Prophet Sulayman (as) was "a fount of molten copper." This can be understood in several senses. By the use of melted copper, it may be referring to the existence, at his time, of an advanced technology that employed electricity. We know that copper is one of the best metals for conducting electricity and heat, and thus constitutes the basis of the electrical industry, which uses much of the copper produced in the world. The expression "flow out" may indicate that electricity can be used in many fields. (Allah knows best.)

ARTESIAN WELLS

We divided them up into twelve tribes-communities. We revealed to Musa, when his people asked him for water: "Strike the rock with your staff." Twelve fountains flowed out from it, and all the people knew their drinking place. And We shaded them with clouds and sent down manna and quails to them: "Eat of the good things We have provided for you." They did not wrong Us; rather, they wronged themselves. (Qur'an, 7:160)

The above verse describes how Prophet Musa's (as) people asked him for water and how he provided places where each tribe could drink. Clearly, his people were suffering from a shortage of water. Such shortages still exist, for more than 1 billion people today lack access to clean water, and 2.4 billion still live without improved sanitation. According to projected estimates, by 2025 about 5 billion people will not have access to sufficient amounts of water.[204] Every year, some 12 million people die from water scarcity; 3 million of whom are children who die from waterborne diseases.[205]

Today, 31 countries, comprising 8 percent of the world's population, face chronic freshwater shortages. By 2025, this number is expected to rise to 48 countries.[206] According to UN predictions, renewable freshwater will become an even more limited resource by 2025, and the number of 131 million people experiencing water problems will rise to either 817 million (according to low population growth projections) or 1.079 billion (according to high population growth projections).[207]

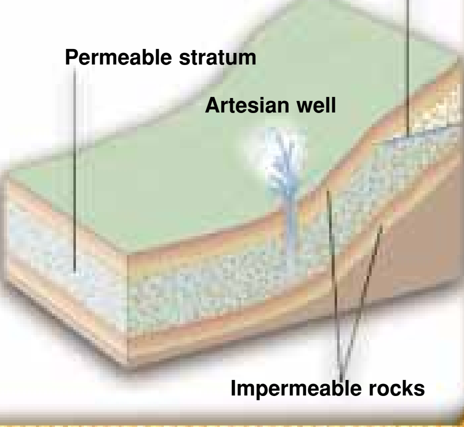
Groundwater, the largest source of fresh water on Earth, represents more than 90 percent of the readily available freshwater reserves[208] and is therefore of vital importance to meeting the water needs of up to 2 billion people.[209] It constitutes the primary source of water for up to 50 percent of the American population, a figure that rises to 95 percent in rural areas.[210] Groundwater is also the safest and most reliable source of fresh water. At the same time, this water can be

used to produce geothermal energy and save energy by using heat pumps.

When the water sucked up from the soil meets an impermeable underground layer, it collects there and forms a water source. This water is then brought to the surface by the artesian method. Artesian springs are formed by sedimentary rocks that can store underground water.

The fact that artesian wells are drilled in rocky areas runs parallel to the description in the Qur'an. Given that Allah commanded Prophet Musa (as) to strike the rock, Surat al-A`raf 160 may be indicating this method. (Allah knows best.) The verb *idrib*, translated as "strike," can also mean "to raise, to open." Thus, this verse may be describing a water source being opened by the raising of the rock. As a result, pressurized water may have emerged, as described in the verb *inbajasa* (to pour out, flow freely, bubble up, flow), just as happens with artesian wells. If sufficient pressure forms, water can continue to flow to the surface without the need for a pump.

It is particularly striking that current solutions for dealing with water scarcity use underground water resources. In fact, one of the most effective methods of doing so is the artesian well. In other words, we might be copying Prophet Musa's (as) example of striking or lifting the rock without even knowing it. Surat al-A`raf 160 may therefore be a reference to artesian wells, the first of which was opened in 1126 in the French region of Artois. (Allah knows best.)



A closed artesian aquifer is confined by an overlying impermeable body of rock, which prevents any water from filtering down into the aquifer. Instead, water enters the tilted aquifer layer through a recharge area, where the aquifer rock is exposed at higher elevations. The flow in an artesian aquifer resembles water flowing through a J-shaped tube. Water added on the tube's long side provides enough pressure to drive the water upward on the tube's shorter side.

THE ARMY-ANT IN TECHNOLOGY

Then, when they reached the Valley of the Ants, an ant said: "Ants! Enter your dwellings, so that Sulayman and his troops do not crush you unwittingly." (Qur'an, 27:18)

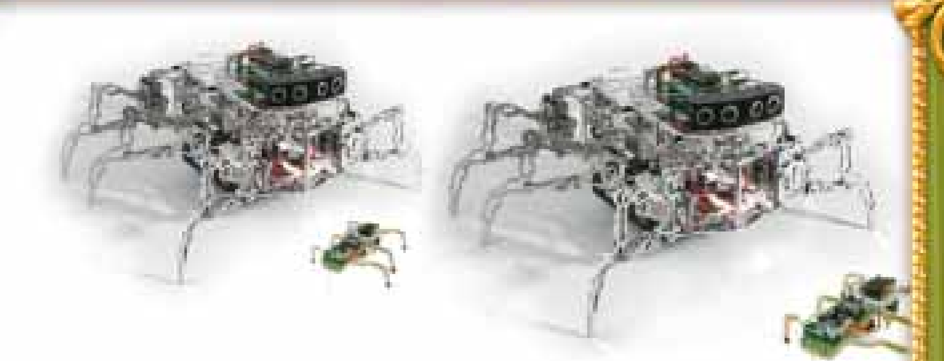
The "Valley of the Ants" refers to a special place and special ants. In addition, the fact that Prophet Sulayman (as) could hear the ants talking among themselves may contain striking references to future developments in computer technology. The present-day term "Silicon Valley" refers to the centre of the world of technology. It is most significant that a "valley of the ants" appears in the account of Prophet Sulayman's (as) life. Allah may be drawing our attention to the advanced technology of the future.

Furthermore, ants and other insect species are widely used in advanced technology as models in robot projects and are intended to serve in a wide range of areas, from the defence industry to technology. The verse may also be referring to these developments.

Latest Developments in Miniature Technology: Army-Ant Robots

The best known project using ants as a model are the "Army-Ant Robot" projects being carried out independently in several countries. One study being carried out by the Virginia Polytechnic Institute and





Virginia State University seeks to develop small, inexpensive, and simple physically identical robots that can be used as a robot army. Project officials explain these robots' functionality in the following terms: "The way they behave as a group, in a coordinated manner, perform a series of physical actions, and take joint decisions." These robot armies' mechanical and electrical designs have been based on the behaviour of an ant community. They are called the "army-ant" robots because of their similarities to their insect counterparts.

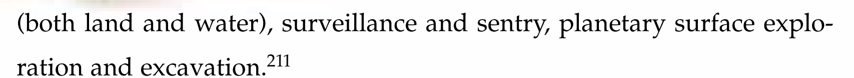
The "army-ant" robot system was originally designed as a "material-carrying system." According to this scenario, several small robots would be charged with jointly lifting and carrying objects. It was later decided that they could be used for other tasks. One report describes other tasks to which they might be assigned in the future:

> Nuclear and hazardous waste cleanup with robotic "swarms," mining (including material removal and search-and-rescue), mine sweeping









(both land and water), surveillance and sentry, planetary surface exploration and excavation.[211]

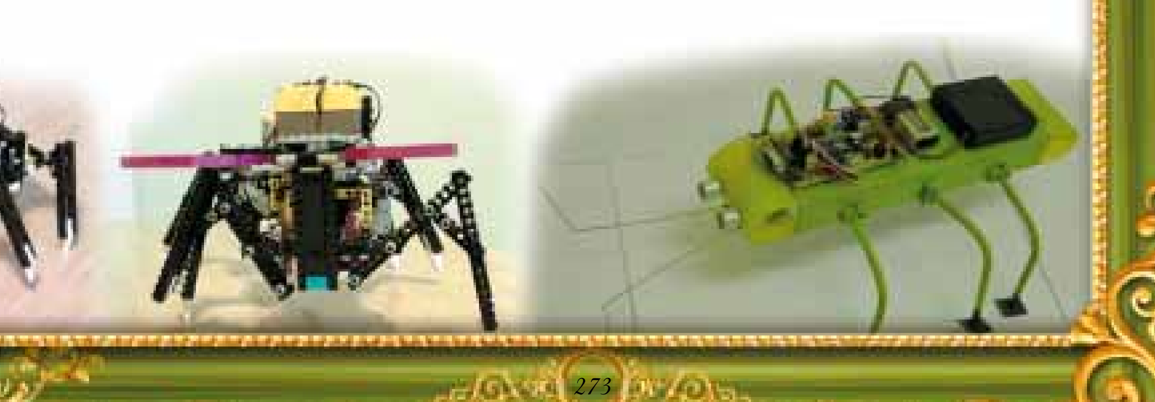
In a report by Israel A. Wagner, an expert on ant robot technology, the ant robot projects were described in these terms:

> Ant-robots are simple physical or virtual creatures designed to cooperate in order to achieve a common goal. They are assumed to have very limited resources of energy, sensing and computing, and to communicate via traces left in the workspace or on the ground, like many insects naturally do…
>
> The distribution of work among multiple a(ge)nts can be made by either a central controller who sends orders to the agents, or by an a-priori agreement on a certain partitioning that, if obeyed by the agents, eventually leads to a completion of the given mission. A third way, used throughout the current work, is to design the behavior of individuals such that cooperation will naturally emerge in the course of their work, without making a-priori decisions on the structure of the cooperation. The specific application that we address is covering, which is also known as exploring or searching. This variety of names hints to the many



applications this problem might have: from cleaning the floor of a house to mapping an unknown planet or demining a mine field.[212]

As can be seen in these examples, an ant's social lifestyle forms the basis of many projects, and the various ant-based robot technologies are providing benefits for human beings. That is why it is so important that ants and their valley are referred to in the Qur'anic account of Prophet Sulayman's (as) life. The term "ants" in the verse may refer to an army consisting of robots, future developments in robot technology, and how robots will play an important role in human life. For example, they may perform many arduous tasks and thus make people's lives more comfortable. (Allah knows best.)



ATOMIC ENERGY AND FISSION

Allah splits the seed and kernel. He brings forth the living from the dead, and produces the dead out of the living. That is Allah, so how are you misguided? (Qur'an, 6:95)

The terms "seed" (*al-habb*) and "kernel" (*al-nawaa*) in the above verse may indicate the splitting of the atom. Indeed, the dictionary meanings of *al-nawaa* include "nucleus, centre, atomic nucleus." Furthermore, the description of bringing forth the living from the dead can be interpreted as Allah creating matter from dead energy. Producing the dead out of the living may refer to energy (dead) emerging from matter (living), since the atom is in motion. (Allah knows best.) That is because as well as "living," *al-hayy* can also mean "active, energetic." With its meaning of "non-living," *al-mayyit*, translated above as "dead," may very probably refer to energy.

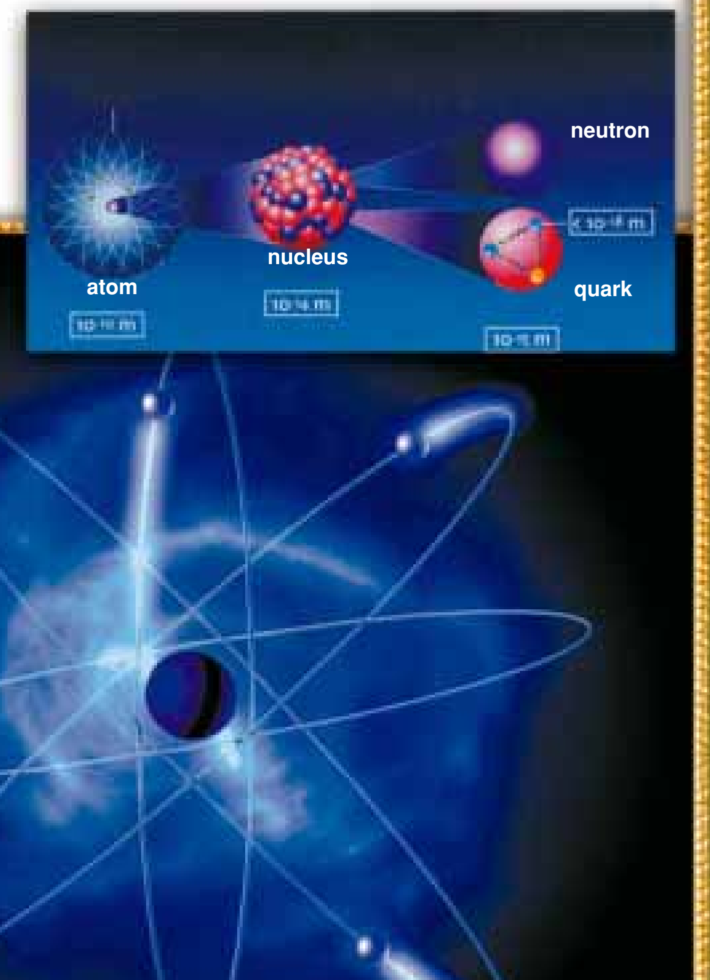
Scientists define energy as the capacity for doing work. Matter, the material that comprises all things on Earth and in the universe, consists of atoms and molecules that can be seen to be in motion under an electron microscope. In the early twentieth century, Albert Einstein (d. 1955) theorised that matter could be converted into energy, suggesting that the two were inter-related at the atomic level.[213] This may be the bringing forth of the dead from the living, as described above, or, in other words, obtaining energy from matter, which is in motion at the atomic level. In addition, *yukhriju*, translated as "bringing forth," also means "bringing out, emitting" (as in the case of electrical waves). Therefore, the terms in this verse may be indicating the form of energy obtained from the atom. (Allah knows best.)

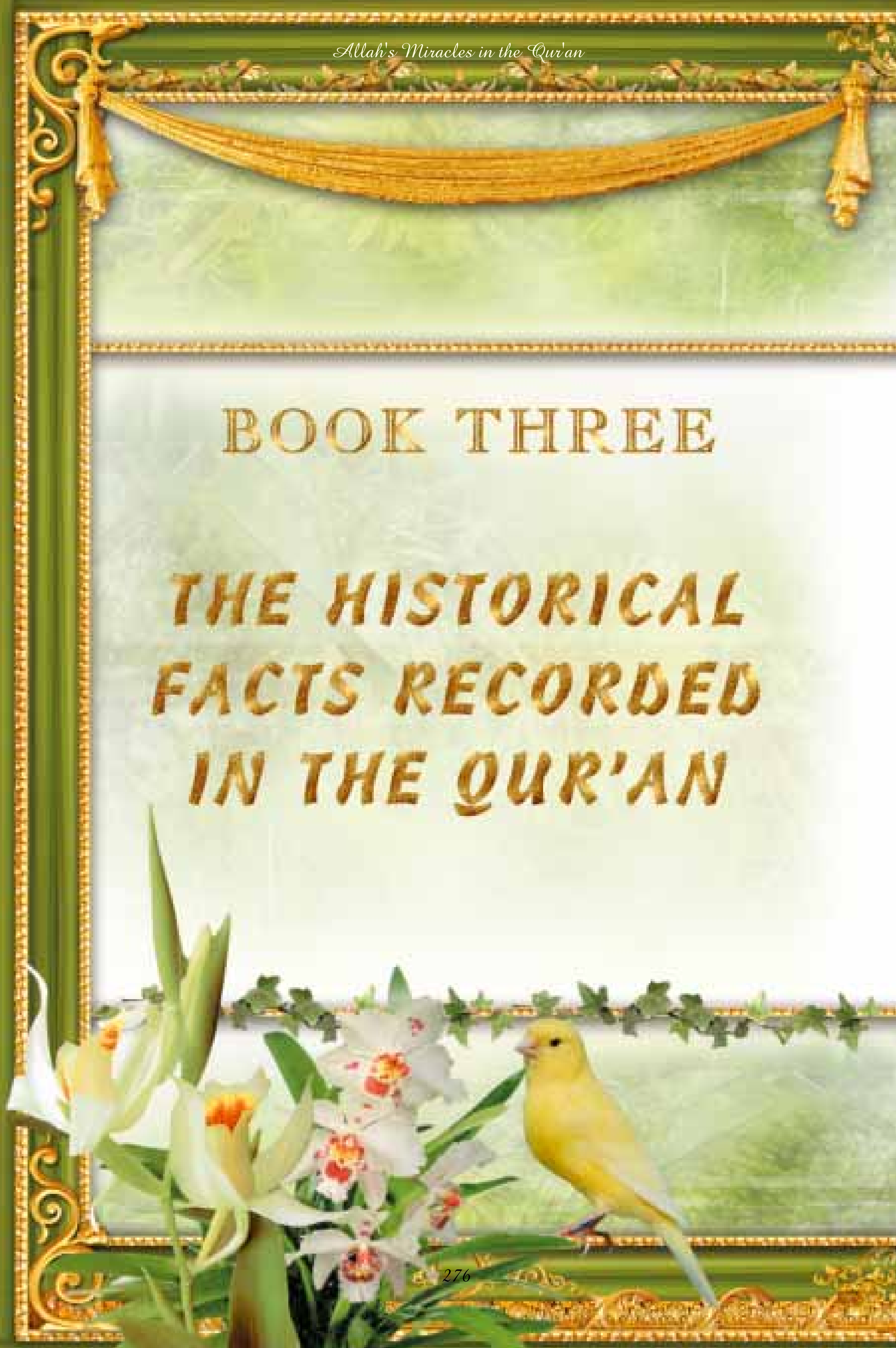
Scientists can now split the atom by dividing its nucleus. Taking Einstein's theories as their starting point, they obtained energy from matter in the 1940s by means of nuclear fission, the process of splitting the atomic nucleus. The word *faaliqu* in Surat al-An`am 95, translated as

"to split," may be a reference to fission's dictionary meaning: the process of splitting (the atom's nucleus). When this process takes place, enormous amounts of energy are released.

The words in Surat al-An`am 95 are very wise in terms of their meanings. The phenomena described in this verse bear a very close resemblance to the splitting of the atom's nucleus in order to obtain atomic energy. The verse may therefore be a reference to nuclear fission, which was only made possible by twentieth-century technology. (Allah knows best.)

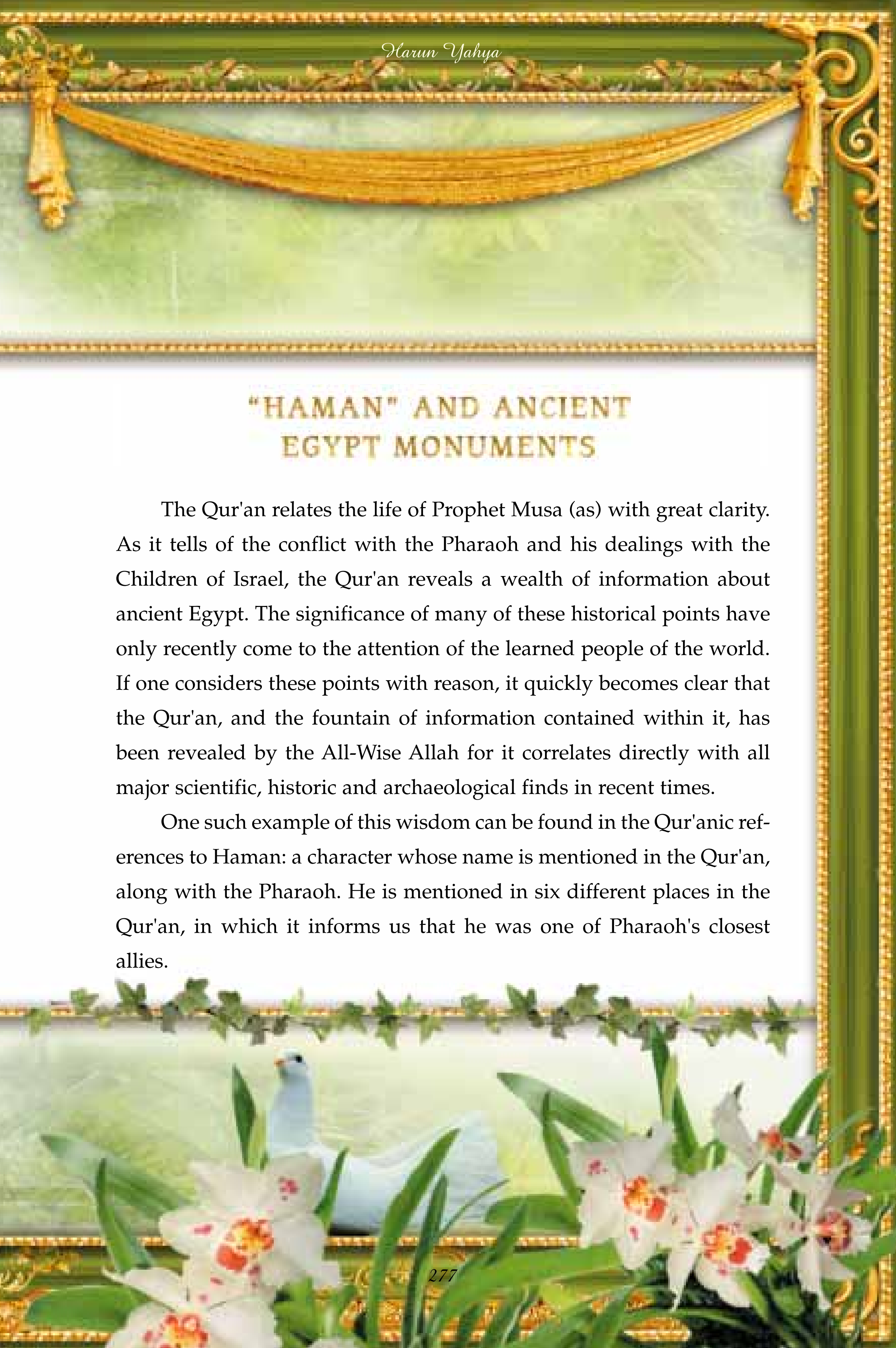
Today, atomic nucleus can be split into smaller nuclei by means of nuclear fission.





BOOK THREE

THE HISTORICAL FACTS RECORDED IN THE QUR'AN



"HAMAN" AND ANCIENT EGYPT MONUMENTS

The Qur'an relates the life of Prophet Musa (as) with great clarity. As it tells of the conflict with the Pharaoh and his dealings with the Children of Israel, the Qur'an reveals a wealth of information about ancient Egypt. The significance of many of these historical points have only recently come to the attention of the learned people of the world. If one considers these points with reason, it quickly becomes clear that the Qur'an, and the fountain of information contained within it, has been revealed by the All-Wise Allah for it correlates directly with all major scientific, historic and archaeological finds in recent times.

One such example of this wisdom can be found in the Qur'anic references to Haman: a character whose name is mentioned in the Qur'an, along with the Pharaoh. He is mentioned in six different places in the Qur'an, in which it informs us that he was one of Pharaoh's closest allies.

Surprisingly, the name "Haman" is never mentioned in those sections of the Torah pertaining to the life of Prophet Musa (as). However, the mention of Haman can be found in the last chapters of the Old Testament as the helper of a Babylonian king who inflicted many cruelties on the Israelites approximately 1,100 years after Prophet Musa (as).The Qur'an, far more in tune with recent archaeological discoveries, does indeed contain the word "Haman" in reference to the life of Prophet Musa (as).

The criticisms thrown at the book of Islam by some non-Muslims have disappeared by the wayside as an Egyptian hieroglyphic script had been deciphered, approximately 200 years ago, and the name "Haman" discovered in the ancient scripts. Until the 18th century, the writings and inscriptions of ancient Egypt could not be understood. The language of ancient Egypt was made up of symbols rather than words: hieroglyphics. These pictures, which tell stories and keep records of important events in the same way that modern words do, was usually engraved on rock or stone and many examples survived through the ages. With the spread of Christianity and other cultural influences in the 2nd and 3rd centuries, Egypt forsook its ancient beliefs along with the hieroglyphic writing which was synonymous with that now defunct belief system. The last known example of the use of hieroglyphic writing was an inscription dated 394. The language of pictures and symbols was forgotten, leaving nobody who could read and understand it. Naturally, this made historical and archaeological study virtually impossible. This situation remained-until just over two centuries ago.

In 1799, much to the delight of historians and other learned people, the mystery of ancient Egyptian hieroglyphics was solved by the discovery of a tablet called the "Rosetta Stone." This amazing find dated back to 196 B.C. The importance of this inscription was that it was written in three different forms of writing: hieroglyphics, demotic (a simplified form of ancient Egyptian hieratic writing) and Greek. With the

help of the Greek script, the ancient Egyptian writings were decoded. The translation of the inscription was completed by a Frenchman named Jean-Françoise Champollion. Hence, a forgotten language and the events related in it were brought to light. In this way, a great deal of knowledge about the civilization, religion and social life of ancient Egypt became available to mankind and this opened the way to greater knowledge about this important era in human history.

Through the decoding of hieroglyph, an important piece of knowledge was revealed: The name "Haman" was indeed mentioned in Egyptian inscriptions. This name was referred to in a monument in the Hof Museum in Vienna. This same inscription also indicated the close relationship between Haman and the Pharaoh.[214]

In the dictionary of *People in the New Kingdom*, that was prepared based on the entire collection of inscriptions, Haman is said to be "the head of stone quarry workers."[215]

The result revealed a very important truth: Unlike the false assertion of the opponents of the Qur'an, Haman was a person who lived in Egypt at the time of Prophet Musa (as). He had been close to the Pharaoh and had been involved in construction work, just as imparted in the Qur'an.

Pharaoh said, "Council, I do not know of any other deity for you apart from Me. Haman, kindle a fire for me over the clay and *build me a lofty tower* so that perhaps I may be able to climb up to Musa's deity! I consider him a blatant liar." (Qur'an, 28:38)

The verse in the Qur'an describing the event where the Pharaoh asked Haman to build a tower is in perfect agreement with this archaeological finding. Through this brilliant discovery, the irrational claims of the opponents of the Qur'an were demonstrated to be false and intellectually worthless.

In a miraculous way, the Qur'an conveys to us historical information that could not have been possessed or understood at the time of the Prophet (saas). Hieroglyphics could not be deciphered until the late

1700s so the information could not have been ascertained from Egyptian sources. When the name "Haman" was discovered in the ancient scripts, it was further proof of the infallibility of Allah's word.

The name "Haman" was not known until the decoding of Egyptian hieroglyphics in the 19th century. When the hieroglyphics were decoded, it was understood that Haman was a close helper of the Pharaoh and was "the head of the stone quarries." (Below are shown ancient Egyptian construction workers). The most important point here is that Haman is mentioned in the Qur'an as the person who directed construction work under the command of the Pharaoh. This means that information that could not have been known by anybody else at that time was given in the Qur'an, a point most worthy of note.



PROPHET MUSA (AS) AND SEA'S SPLITTING IN TWO

The kings of Egypt-known as "Pharaohs" (or "Fir`awn" in the Arabic of the Qur'an)-regarded themselves as divine in the polytheistic, superstitious religion of ancient Egypt. At a time when the people of Egypt favoured a superstitious belief system over a divine belief system-the same era in which when the Children of Israel were enslaved-Allah sent Prophet Musa (as) as a messenger to the tribe of Egypt.

However, Pharaoh and his court, and the people of Egypt in general, almost universally refused to abandon their idolatrous beliefs when Prophet Musa (as) called them to divine religion and the Oneness of Allah. Prophet Musa (as) revealed to Pharaoh and his courtiers that they should avoid false worship, warning them of Allah's wrath. In response to this, they rose up and slandered Prophet Musa (as): They accused him of being mad, of being a sorcerer and of falsehood. Pharaoh and his people refused to submit to Prophet Musa (as) even though many troubles were visited upon them. They refused to accept Allah as the only deity. They even held Prophet Musa (as) responsible for what had befallen them and sought to exile him from Egypt. In the Qur'an, Allah makes this reference to Prophet Musa (as) and the believers with him:

We revealed to Musa: "Travel with Our servants by night. You will certainly be pursued." Pharaoh sent marshals into the cities: "These people are a small group and we find them irritating and we constitute a vigilant majority." We expelled them from gardens and springs, from treasures and a splendid situation. So it was! And We bequeathed them to the tribe of Israel. So they pursued them towards the east. (Qur'an, 26:52-60)

As revealed in the Qur'an, the two communities met at the edge of the sea following this pursuit. Allah divided the sea and saved Prophet

Musa (as) and the believers with him, destroying Pharaoh and his people. This aid from Allah is revealed thus:

> **So We revealed to Musa, "Strike the sea with your staff." And it split in two, each part like a towering cliff. And We brought the others right up to it. We rescued Musa and all those who were with him. Then We drowned the rest. There is certainly a sign in that yet most of them are not believers. Truly your Lord is the Almighty, the Most Merciful. (Qur'an, 26:63-68)**

In connection with this subject, the following account has recently been found in papyruses from the time of Pharaoh:

> From Amenamoni, head of the protective books of the white room of the palace, to the scribe Penterhor:
>
> When this letter reaches you and has been read point by point, surrender your heart to the sharpest pain, like a leaf before the storm, when you learn of **the sorrowful disaster of the drowning in the whirlpool**…
>
> Calamity struck him suddenly and inescapably. **Depict the destruction of the lords, the lord of the tribes, the king of the east and the west. The sleep in the waters has made something helpless out of something great.** What news can compare to the news I have sent you?[216]

The fact that past events revealed in the Qur'an are being proved



today is definitely an important miracle of the Qur'an. (See Harun Yahya, *Perished Nations*, Ta - Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002; *The Prophet Musa (as)*, Millat Book Center, India, 2001)

This miracle, experienced by Prophet Musa (as) and the Children of Israel as they crossed the Red Sea, has been the subject of many studies. Archaeological investigations have established not only the path taken to the Red Sea after leaving Egypt, but also that the place where Pharaoh and Prophet Musa (as) and his tribe met was one surrounded by mountains. (Allah knows best.)

Following a great deal of study and investigation taking this as the



The map shows the route taken by Prophet Musa (as) after leaving Egypt and the estimated location of the site where the sea divided.

starting point, scientists came to striking conclusions with regard to how the sea was divided into two. These conclusions are in full agreement with those revealed in the Qur'an. The way that historical events described in the Qur'an are today illuminated by historical records is without doubt an important miracle of the Book of Islam.

Naum Volzinger and Alexei Androsov, two Russian mathematicians, proved that Prophet Musa (as) could indeed have parted the sea. Unlike those scientists who concentrated on the probability of such a miracle, the Russian mathematicians investigated the conditions that might have led to the miracle. In turn, this led to the confirmation of the miracle itself.

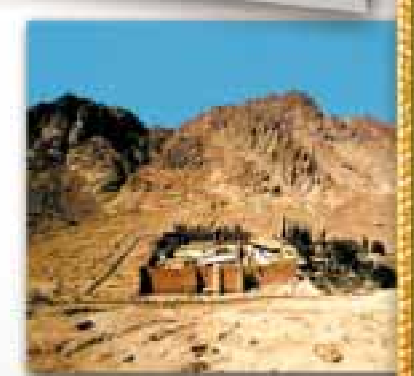
According to the study which was published in the Bulletin of the

Russian Academy of Sciences, there was a reef, which was close to the surface in the Red Sea at that time. From there, the scientists set about establishing the speed of the wind and the strength of the storm needed to leave the reef high and dry at low tide. As a result, it became apparent that a wind speed of 30 metres (98.5 feet) per second

The Egyptian Coast

The sea bed in this region forms an extraordinary reef.

The mountain known as Jabal-al Musa is generally regarded as being in the Sinai Peninsula. However, recent findings have shown that it is actually on the Arabian shore of the Red Sea.



Following a long and difficult journey for Prophet Musa (as) and the Israelites, a passage out between the mountains could be seen.



That part of the Sinai Peninsula opening onto the Gulf.

Pharaoh's royal chariot is on display in a museum in Egypt. A similar example was found during excavations in the location where the sea divided.



would have caused the sea to retract, leaving the reef exposed. Naum Volzinger, of the Institute of Oceanography of the Russian Academy of Sciences, stated that "if the [east] wind blew all night at a speed of 30 metres per second then the reef would be dry." He also said that "it would take the Jews-there were 600,000 of them-four hours to cross the 7 kilometre reef that runs from one coast to another… then, in half an hour, the waters would come back."[217] In addition, Volzinger said that he and his colleague Androsov studied the issue strictly from Isaac Newton's point of view. As he put it, "I am convinced that God rules the Earth through the laws of physics."[218]

It must not be forgotten that there is always a possibility of this natural phenomenon taking place. If Allah so desires, this miracle can take place again when the requisite conditions-such as windspeed, time and place-are met. However, the truly miraculous aspect here is the fact that these events took place just when Prophet Musa (as) and his tribe were about to be vanquished. The fact that the waters withdrew just as Prophet Musa (as) and the community with him were about to cross them-not to mention the way that the waters returned just as Pharaoh and his army were crossing-is a clear example of the aid that Allah gives to the faithful. Indeed, the way that Prophet Musa (as) relied on and trusted in Allah is an example of the most pleasing moral values:

And when the two hosts came into sight of one another Musa's companions said, "We will surely be overtaken!" He said, "Never! My Lord is with me and He will guide me." (Qur'an, 26:61-62)



THE TROUBLES WHICH AFFLICTED PHARAOH AND THOSE AROUND HIM

Pharaoh and those people close to him were so devoted to their polytheistic system and pagan beliefs that not even message of Prophet Musa (as), armed with wisdom and spectacular miracles, could soften their hearts and thus turn them away from baseless superstitions. They also openly stated this fact:

They said, "No matter what kind of sign you bring us to bewitch us, we will not believe in you." (Qur'an, 7:132)

Because of their haughty attitude, Allah sent to them afflictions, described as "**Signs, clear and distinct**" in one verse, in order to punish them for their haughtiness. (Qur'an, 7:133) The first of these was drought. As a result, there was a fall in production. The relevant verse of the Qur'an states:

We seized Pharaoh's people with years of drought and scarcity of fruits so that hopefully they would pay heed. (Qur'an, 7:130)

The Egyptians' agricultural systems depended on the River Nile and changes in natural conditions did not therefore generally affect them. However, Pharaoh and those around him suffered greatly because of their pride and refusal to recognise Allah's Messenger. Yet instead of "paying heed," they regarded these events as bad luck caused by Prophet Musa (as) and the tribe of Israel. Following that, Allah sent a series of tribulations. We are told of these in the Qur'an:

So *We sent down on them floods, locusts, lice, frogs and blood, signs, clear and distinct*, but they proved arrogant and were an evildoing people. (Qur'an, 7:133)

The details in the papyrus regarding the disasters that struck the people of Egypt are just as described in the Qur'an. In the Qur'an, we are told about these catastrophes. This Islamic account of this period of

human history has been confirmed by the discovery in Egypt, in the early 19th century, of the Ipuwer papyruses dating back to the Middle Kingdom. After the discovery of this papyrus, it was sent to the Leiden Dutch Museum in 1909 and translated by A. H. Gardiner, a prominent scholar of ancient Egypt. In the papyrus were described such disasters in Egypt as famine, drought and the fleeing of the slaves from Egypt. Moreover, it appears that the writer of the papyrus, one Ipuwer, had actually witnessed these events. This is how the Ipuwer papyrus refers to these catastrophes described in the Qur'an:

> Plague is throughout the land. Blood is everywhere.[219]
>
> The river is blood.[220]
>
> Forsooth, that has perished which yesterday was seen. The land is left over to its weariness like the cutting of flax.[221]
>
> Lower Egypt weeps... The entire palace is without its revenues. To it belong (by right) wheat and barley, geese and fish.[222]
>
> Forsooth, grain has perished on every side.[223]
>
> The land-to its whole extent confusion and terrible noise… For nine days there was no exit from the palace and no one could see the face of his fellow… Towns were destroyed by mighty tides… Upper Egypt suffered devastation… blood everywhere… pestilence throughout the country… No one really sails north to Byblos today. What shall we do for cedar for our mummies?… Gold is lacking…[224]
>
> Men shrink from tasting-human beings, and thirst after water.[225]
>
> That is our water! That is our happiness! What shall we do in respect thereof? All is ruin![226]
>
> The towns are destroyed. Upper Egypt has become dry.[227]
>
> The residence is overturned in a minute.[228]

The chain of disasters which struck the people of Egypt, according to this document, conforms perfectly with the Qur'anic account of these matters.[229] This papyrus, which closely parallels the catastrophes which struck Egypt in the time of Pharaoh, once again demonstrates the Qur'an to be divine in origin.

Historical Documents Confirm the Information Given in the Qur'an

In the early 19th century a papyrus dating back to the Middle Kingdom was discovered in Egypt. The papyrus was taken to the Leiden Museum in Holland and translated by A.H. Gardiner in 1909. The entire text appears in the book *Admonitions of an Egyptian from a Hieratic Papyrus in Leiden*, and describes major changes in Egypt; famine, drought, the slaves' flight from Egypt with their assets, and death all over the nation. The papyrus was written by an Egyptian called Ipuwer and it appears from its contents that this individual personally witnessed the disasters that struck Egypt. ("The Ten Plagues – Live From Egypt," Rabbi Mordechai Becher, www.ohr.org.il/yhiy/article.php/838.) This papyrus is a most significant hand-written description of the catastrophes, the death of Egyptian society and the destruction of Pharaoh.



THE WORD "PHARAOH" IN THE QUR'AN

In the Old Testament, the Egyptian ruler during the period of Prophet Ibrahim (as) and Prophet Yusuf (as) are named "Pharaoh." However, this title was actually employed after the eras in which these two prophets lived.

While addressing the Egyptian ruler at the time of Prophet Yusuf (as), the word "*Al-Malik*" in Arabic is used in the Qur'an: It refers to a ruler, king or sultan:

***The King* said, 'Bring him to me straight away!'… (Qur'an, 12:50)**

The ruler of Egypt in the time of Prophet Musa (as) is referred to as "Pharaoh." This distinction in the Qur'an is not made in the Old and New Testaments nor by Jewish historians. In the Bible, the word "Pharaoh" is used, in every reference to an Egyptian monarch. On the other hand, the Qur'an is far more concise and accurate in the terminology it employs.

The use of the word "Pharaoh" in Egyptian history belongs only to the late period. This particular title began to be employed in the 14th century B.C., during the reign of Amenhotep IV. Prophet Yusuf (as) lived at least 200 years before that time.[230]

The Encyclopaedia Britannica says that the word "Pharaoh" was a title of respect used from the New Kingdom (beginning with the 18th dynasty; B.C. 1539-1292) until the 22nd dynasty (B.C. 945-730), after which this term of address became the title of the king. Further information on this

subject comes from *the Academic American Encyclopaedia*, which states that the title of Pharaoh began to be used in the New Kingdom.

As we have seen, the use of the word "Pharaoh" dates from a specific period in history. For that reason, the fact that the Qur'an distinguishes between the different Egyptian titles in different Egyptian eras is yet another proof that the Qur'an is Allah's word.

In this way We give you news of what has gone before and We have given you a reminder direct from Us. Those who turn away from it will bear a heavy burden on the Day of Rising. (Qur'an, 20: 99-100)

THE PROPHET MUSA (AS) REFERRED TO AS A MAGICIAN

In papyruses from the time of Pharaoh, Prophet Musa (as) is regularly referred to as a magician. (The papyruses in question are held in the British Museum.) Despite all the best efforts of Pharaoh and his supporters, they were never able to get the better of Prophet Musa (as) in their all-out war against him and the Children of Israel.

> This is written on the second day of the seventh month of Payni during the reign of Ramses, the elder brother of Ammon, the Sun's son who is the administrator of justice, and who lives eternally like his father, the Sun… When you receive this letter, rise, set to work and undertake the supervision of the fields. When you hear the news of a new disaster such as a flood ruining the entire cereals, think. Hemton destroyed them by consuming them greedily, granaries are cracked, rats are clumped in fields, fleas are like hurricane, scorpions are eating up greedily, wounds caused by little flies are too many to count. And these grieve the people… **The Scribe** [probably referring to Prophet Musa (as)] **fulfilled the purpose to destroy the total amount of cereals…** Sorceries are like their bread. Scribe… is the first of men in the art of writing.

The reference to Prophet Musa (as), and the "magician" accusations hurled at him, can be found in the following verses:

> **They said, "Magician, invoke your Lord for us by the contract He has made with you and we shall certainly follow the guidance." (Qur'an, 43:49)**
>
> **They said, "No matter what kind of sign you bring us to bewitch us, we will not believe in you." (Qur'an, 7:132)**

NUH'S FLOOD

We sent Nuh to his people and he remained among them for fifty short of a thousand years; yet the flood engulfed them while they were wrongdoers. (Qur'an, 29:14)

Prophet Nuh (as) was sent to his people by Allah. They had distanced themselves from the commandments of the Lord and ascribed partners to Him. Prophet Nuh (as) warned them that they should serve Allah alone and abandon the false worship which they had established in their community. Although Prophet Nuh (as) called on his people with great eloquence and wisdom, and warned them against the punishment of Allah, they rejected the prophet and continued to associate partners to Him. At this, Allah told Prophet Nuh (as) that He would punish the unbelievers by drowning them. But He also informed His Messenger that His mercy would save the believers, those who embraced true religion and worshipped the One and Only god. The destruction of the people of Nuh and the salvation of the believers is described thus in the Qur'an:

But they denied him so We rescued him and those with him in the ark. And We drowned the people who denied Our signs. They were a blind people. (Qur'an, 7:64)

When the time of punishment came, the water in the ground combined with violent rains to cause a giant flood. (Allah knows best.) It is revealed that before the flood came, Allah spoke to Prophet Nuh (as):

We revealed to him: "Build the ship under Our supervision and as We reveal. When Our command comes and water bubbles up from the earth, load into it a pair of every species, and your family-except for those among them against whom the word has already gone ahead. And do not address Me concerning those who do wrong. They shall be drowned." (Qur'an, 23:27)

Apart from those who boarded Prophet Nuh's (as) Ark, the entire tribe was drowned. The dead included the prophet's son who thought he could escape by seeking shelter on a mountain.

It was said, "Earth, swallow up your water!" and, "Heaven, hold back your rain!" And the water subsided and the affair was concluded and the ark came to land on al-Judi. And it was said, "Away with the people of the wrongdoers!" (Qur'an, 11:44)

Compared to the flood accounts contained in Jewish scriptures, and indeed the various cultural beliefs of other peoples, the Qur'anic account, which was revealed by Allah and is the only divine text to have remained uncorrupted, stands as the most reliable of all these accounts. The Old Testament, a corrupted text, says that this flood was universal and covered the whole world. On the contrary, it appears from the relevant verses that the flood was a regional one and punished not the whole world but only the tribe that rejected Prophet Nuh (as). Those who were destroyed in it were the people who rejected the message of Prophet Nuh (as) and persisted in their denial. There is no indication in the Qur'an that the flood was universal. The verses on the subject read:

We sent Nuh to his people: "I am a clear warner to you. Worship none but Allah. I fear for you the punishment of a painful day." (Qur'an, 11:25-26)

But they denied him so We rescued him and those with him in the ark. And We drowned the people who denied Our signs. They were a blind people. (Qur'an, 7:64)

So We rescued him and those with him by mercy from Us, and We cut off the last remnant of those who denied Our signs and were not believers. (Qur'an, 7:72)

As we have seen, we are told in the Qur'an that only the people of Prophet Nuh (as) were destroyed, not the whole world. The corrected states of the corrupted accounts in Christian and Jewish scriptures in the Qur'an prove that it is, in its entirety, a book sent down by Allah.

Excavations in the region where the flood is believed to have occurred also show that the flood was not a universal event, but a wide-scale disaster that affected part of Mesopotamia.

When the waters subsided, the ark came to rest. As revealed in the Qur'an, the resting place of the ark was al-Judi. The word "*juudee*" is sometimes taken to mean a particular mountain, although the Arabic word itself means "high place, hill." From that point of view, the word "*juudee*" can refer to the waters reaching only up to a certain height and not to the covering of all the land. In other words, we learn from the Qur'an that the flood did not swallow up all the land and all the mountains on Earth-as is related in Jewish scriptures and other legends-but only one particular region.

Archaeological Evidence for the Flood

If a natural disaster, sudden migration or war, for example, should result in the destruction of a civilisation, traces of that civilisation are well-protected. The houses people lived in and the objects people used in their daily lives are quickly buried under the earth. These are thus conserved for long periods without being touched by human hands. For students of the past, they provide invaluable clues when they are finally brought to light.

In recent times, the discovery of a large amount of evidence concerning Nuh's Flood has come to the attention of the world's most prominent archaeologists and historians. The Flood, believed to have occurred around 3000 B.C., destroyed an entire civilisation and allowed an entirely new one to be founded in its place. That evidence of the Flood was preserved for thousands of years provides a deterrent to those people who have come after this punishment of the wicked.

Many excavations have been carried out to study the flood, which was localised on and around the Mesopotamian Plains. Digs in the region have encountered traces of a flood in four main cities on the Mesopotamian Plain: Ur, Erech, Kish and Shuruppak. Excavations in



According to the archaeological findings, Nuh's Flood took place on the Mesopotamian Plain, the shape of which was very different to that of today. The present-day limits of the plain are shown with a dotted red line in the above diagram. The wide region beyond that line is known to have been part of the sea at that time.

these cities have shown that these cities were hit by flooding around 3000 B.C.

The oldest of the remains of the civilisation in the city of Ur-today known as Tell al Muqqayar-date back to 7000 B.C. The city of Ur, one of the oldest human civilisations, was a settlement region in which consecutive civilisations were born and died.

The archaeological discoveries which came from study of Ur

unearthed information which clearly informs us that a civilisation there was interrupted by a terrible flood and that new civilisations gradually sprang up in its place. Leonard Woolley led a joint excavation by the British Museum and the University of Pennsylvania in the desert area between Baghdad and the Persian Gulf. Woolley's excavations are described by the German archaeologist Werner Keller as follows:

> "The graves of the kings of Ur" - so Woolley, in the exuberance of his delight at discovering them, had dubbed the tombs of Sumerian nobles whose truly regal splendour had been exposed when the spades of the archaeologists attacked a fifty-foot mound south of the temple and found a long row of superimposed graves. The stone vaults were veritable treasure chests, for they were filled with all the costly goblets, wonderfully shaped jugs and vases, bronze tableware, mother of pearl mosaics, lapis lazuli, and silver surrounded these bodies which had mouldered into dust. Harps and lyres rested against the walls…
>
> When after several days some of Woolley's workmen called out to him, "We are on ground level", he let himself down onto the floor of the shaft to satisfy himself. Woolley's first thought was "This is it at last". It was sand, pure sand of a kind that could only have been deposited by water. They decided to dig on and make the shaft deeper. Deeper and deeper went the spades into the ground: three feet, six feet - still pure mud. Suddenly, at ten feet, the layer of mud stopped as abruptly as it had started. Under this clay deposit of almost ten feet thick, they had struck fresh evidence of human habitation…
>
> The Flood - that was the only possible explanation of this great clay deposit beneath the hill at Ur, which quite clearly separated two epochs of settlement…[231]

Microscopic analysis revealed that this great clay deposit beneath the hill at Ur had accumulated here as a result of a flood, one so large and powerful as to annihilate ancient Sumerian civilisation. The epic of Gilgamesh and the story of Nuh were united in this shaft dug deep under the Mesopotamian desert.

Max Mallowan related the thoughts of Leonard Woolley, who said that such a huge mass of alluvium formed in a single time-slice could only be the result of a huge flood disaster. Woolley also described the flood layer, which separated the Sumerian city of Ur from the city of Al-Ubaid whose inhabitants used painted pottery, as the remains of the Flood.[232]

These facts demonstrated that the city of Ur was one of those places affected by the Flood. The German archaeologist Werner Keller also described the importance of the excavation in question. He has gone on record to say that the yield of city-remains beneath a muddy layer in the archaeological excavations made in Mesopotamia proves that there was indeed a flood in the region.[233]

Another Mesopotamian city to bear the traces of the Flood is the "Kish of the Sumerians," the present-day Tall Al-Uhaimer. Ancient Sumerian records describe this city as the "seat of the first postdiluvian dynasty."[234]

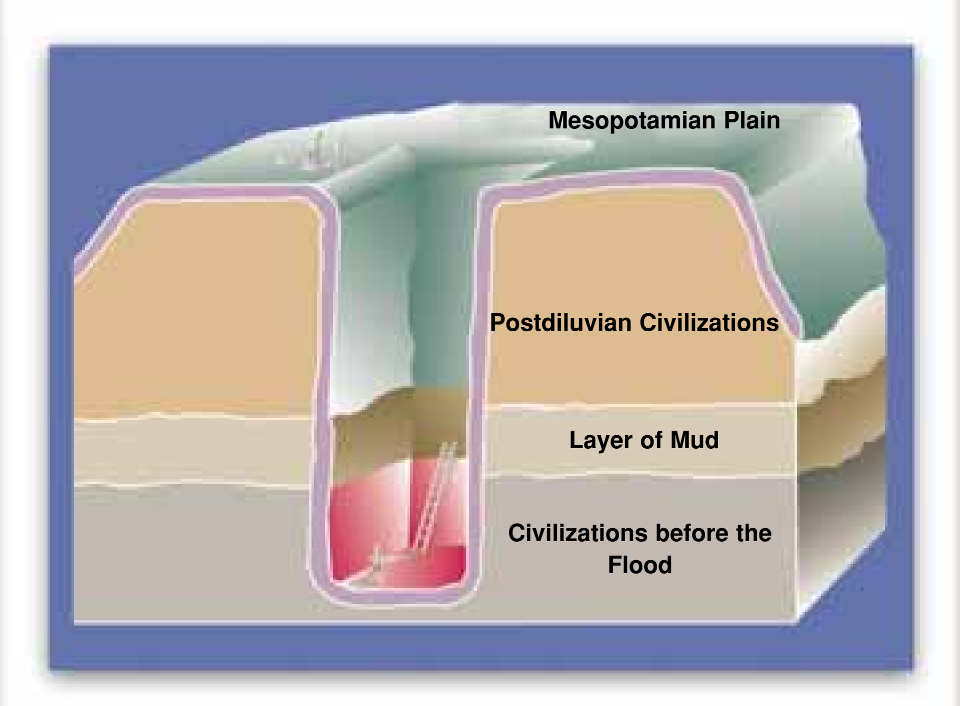
The southern Mesopotamian city of Shuruppak, the present-day Tall Fa'rah, also bears evident traces of the Flood. Archaeological investigations were carried out in this city between 1920 and 1930 by Erich Schmidt of the University of Pennsylvania. These excavations uncovered three layers of habitation which stretched from the late prehistoric period to the 3rd dynasty of Ur (2112-2004 B.C.). The most distinctive finds were ruins of well-built houses along with cuneiform tablets of administrative records and lists of words, indicating a highly developed society already in existence toward the end of the 4th millennium B.C.[235]

When one examines the opinions of these learned scientists, it is clear that they believe that the evidence which supports the Flood account is overwhelming. According to this opinion, this terrible flood took place in or around 3000-2900 B.C. According to Mallowan's account, 4-5 metres below the earth, Schmidt had reached a yellow soil layer (formed by flood) made up of a mixture of clay and sand. This

layer was closer to the plain level than the tumulus profile and it could be observed all around the tumulus. Schmidt defined this layer made of mixed clay and sand, which separated the Jemdet Nasr period from the time of Ancient Kingdom, as "a sand with its origins in the river," and associated it with Nuh's Flood.[236]

In short, the excavations in the city of Shuruppak once again revealed the traces of a flood around 3000-2900 B.C. Together with the other cities, Shuruppak was in all probability struck by the Flood.[237]

The last settlement containing evidence of being struck by the Flood is the city of Erech, south of Shuruppak. Today, it is known as Tall Al-Warka. As in the other cities, a flood layer was also discovered here. Like the other cities, this flood layer has been dated to 3000-2900 B.C.[238]



Excavations in the Mesopotamian Plain revealed the presence of a layer of mud and clay at a depth of 2.5 metres (8 feet). This stratum in all probability consisted of clay carried by the waters of the Flood, and is to be found only under the Mesopotamian Plain.

The Euphrates and Tigris rivers divide Mesopotamia from one end to the other. It appears that in the era in question, these two rivers overflowed, together with all other water sources, great and small, combining with rainwater to create an enormous flood. This phenomenon is reported in these terms in the Qur'an:

So We opened the gates of heaven with torrential water and made the earth burst forth with gushing springs. And the waters met together in a way which was decreed. We bore him on a planked and well-caulked ship. (Qur'an, 54:11-13)

When the clues obtained from the research are evaluated, they indicate that the Flood covered all of the Mesopotamian plains. When we look at the succession of cities-Ur, Erech, Shuruppak and Kish-that bear the traces of the Flood, we see that they all lie in a line. In addition, the geographical structure of the Mesopotamian Plain was very different in around 3000 B.C. compared to its constitution today. At that time, the bed of the River Euphrates was much further to the east than it is today, lying on a line passing through Ur, Erech, Shuruppak and Kish. It therefore appears that the Euphrates burst its banks in this region and destroyed the four cities. (Allah knows best.)

Allah imparted the news of Nuh's Flood in order that it should act as a deterrent for those of that time and a valuable lesson to those who were to come after, people like us. By means of the prophets and books, He sent guidance to different societies. However, each time the texts which were brought to the people by Allah's prophets were corrupted from their original forms. Men added cultural, mystical or mythological elements to the true account of the Flood. The Qur'an, because it is from Allah and because He preserves it eternally, is the only source compatible with the archaeological findings of the past. (See Harun Yahya, *Perished Nations*, Ta-Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002)

THE CITY OF IRAM

At the beginning of 1990, press-releases in the well-known newspapers of the world declared "Fabled Lost Arabian city found," "Arabian city of Legend found" and "The Atlantis of the Sands, Ubar." What rendered this archaeological find particularly intriguing was the fact that this city is mentioned in the Qur'an. Many people had previously suggested ‘Ad was a legend or that the location in question could never be found. Such people could not conceal their astonishment at this phenomenal discovery.

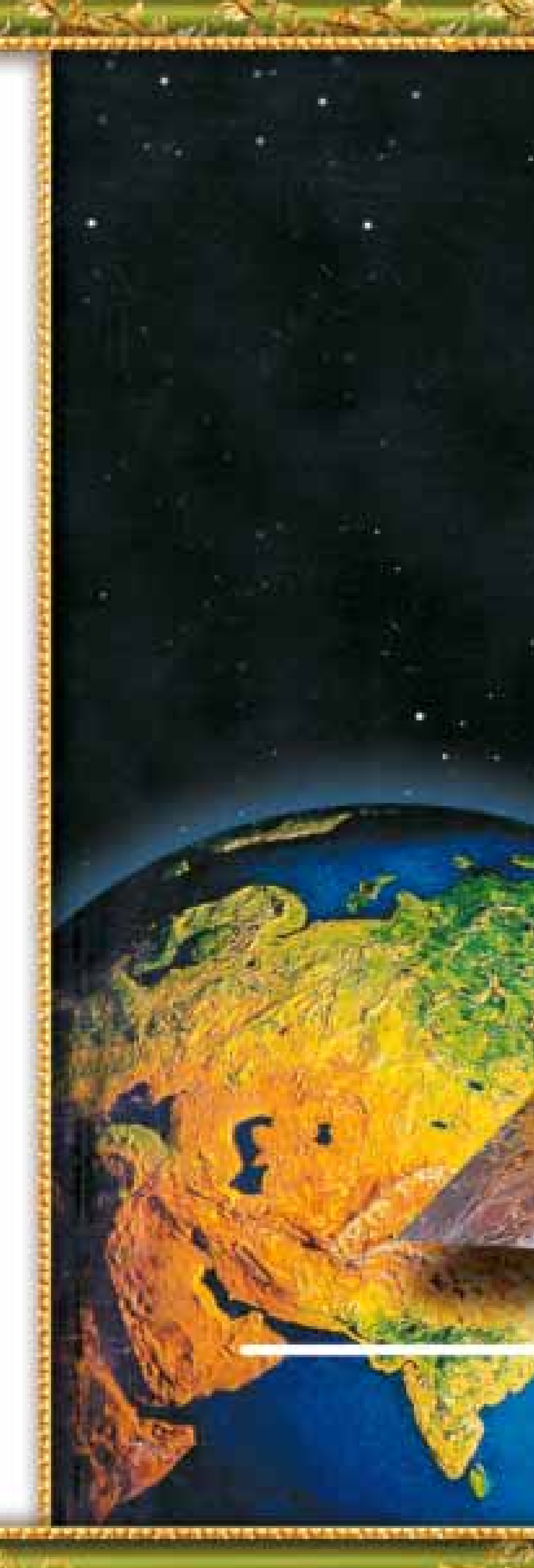
It was Nicholas Clapp, a noted documentary filmmaker and a lecturer on archaeology, who found this legendary city mentioned in the Qur'an.[239] Being an Arabophile and a winning documentary film maker, Clapp had come across a very interesting book during his research on Arabian history. This book was *Arabia Felix*, written by the English researcher Bertram Thomas in 1932. *Arabia Felix* was the Roman designation for the southern part of the Arabian Peninsula which today includes Yemen and much of Oman. The Greeks called this area "Eudaimon Arabia" and medieval Arab scholars called it "Al-Yaman as-Sa`eed."[240] All of these names mean "Happy Yemen," because the people living in that region used to serve as middlemen in the lucrative spice trade between India and places north of the Arabian Peninsula. In addition, the people living in this region produced and distributed "frankincense," an aromatic resin from rare trees.

The English researcher Thomas described these tribes at length and claimed that he found the traces of an ancient city founded by one of these tribes.[241] This was the city known as "Ubar" by the Bedouins. In one of the trips he made to the region, the Bedouins living in the desert had shown him well-worn tracks and stated that these tracks led toward the ancient city of Ubar. Thomas, who showed great interest in the subject, died before being able to complete his research.

Clapp, who examined what the English researcher Thomas wrote, was convinced of the existence of the lost city described in the book. He quickly started his research, attempting to carry on from where Thomas had left the project. Clapp took two different approaches in his mission to prove the existence of Ubar. First, he found the tracks which the Bedouins said existed and in order to aid his work, he applied to NASA to provide the satellite images of the area. After a long struggle, he succeeded in persuading the authorities to take the pictures of the region he so craved.[242]

Clapp went on to study the ancient manuscripts and maps in the Huntington library in California. Here, he quickly found a map covering the region he was studying so intensely. He found a map drawn by the Greek-Egyptian geographer Ptolemy in 200, which showed the location of an old city found in the region and the paths which actually led up to this city.

Meanwhile, his research received a further boost when he received the news that satellite photographs had been taken by mem-





The above satellite photographs show a section of Oman in the south of the Arabian Peninsula. In the photographs of the city of Ubar, viewed from space by NASA in 1992, were identified traces of ancient desert tracks. The people of 'Ad, revealed 1,400 years ago in the Qur'an, emerged as one of the miracles of the Qur'an through modern-day technology.

bers of NASA. In the pictures, caravan trails, which were virtually invisible to the naked eye, caught Clapp's attention. They could only be seen as a whole from the sky. Comparing these pictures with the old map he had in hand, Clapp immediately realised that the trails in the old map corresponded with the trails in the pictures taken from the satellite. The final destination of these trails was a broad site understood to have once been a city.

Finally, thanks to the work of Clapp and Thomas before him-along with a helping hand from NASA researchers-the location of this legendary city, which had been subject of the stories told orally by the Bedouins, was discovered. After a short while, excavations began and remains of an old city were brought to light. This lost city was dubbed "Ubar, the Atlantis of the Sands."

But let us ask: What was it that proved this to be the city of the people of 'Ad mentioned in the Qur'an?

From the very beginning of the study of the site, it was understood that this ruined city belonged to 'Ad. Researchers discovered Iram's pillars, which were specifically mentioned in the Qur'an, in the form of towers in the land of the people of 'Ad. Dr. Juris Zarins, a member of the research team leading the excavation, said that since the towers were alleged to be the distinctive feature of Ubar and since Iram was mentioned as having towers or pillars, this then was the strongest proof so far that the site they had unearthed was Iram, the city of 'Ad described in the Qur'an:

> **Don't you see what your Lord did with 'Ad-Iram of the columns whose like was not created in any land? (Qur'an, 89:6-8)**

As seen, that the information provided by the Qur'an about the events of the past is in total agreement with historical information is another evidence of the fact that the Qur'an is the word of Allah. (See Harun Yahya, *Perished Nations*, Ta-Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002)

THE CITIES OF SODOM AND GOMORRAH

Prophet Lut (as) lived at the same time as Prophet Ibrahim (as) and was sent as a messenger to a neighbouring tribe to Prophet Ibrahim (as). That tribe, according to the Qur'an, practiced a perversion never before seen in the world: homosexuality. When Prophet Lut (as) told the people to abandon one of the greatest sins and delivered to them the message of Allah, they rejected him. They denied that he was a prophet and continued with their horrid lifestyle. As a result of this, the tribe was destroyed in a terrible disaster by Allah.

And Lut, when he said to his people, "Do you commit an obscenity not perpetrated before you by anyone in all the worlds? You come with lust to men instead of women. You are indeed a depraved people." (Qur'an, 7:80-81)

***We rained down a rain upon them.* See the final fate of the evildoers! (Qur'an, 7:84)**

[Our messengers said to Lut,] "*We will bring down on the inhabitants of this city a devastating punishment from heaven* because of their deviance." *We have left a clear sign of them behind* for people who use their intellect. (Qur'an, 29:34-35)

This city, in which Prophet Lut (as) lived and which was later destroyed, is called "Sodom" in the Old Testament. It appears that this people, who lived to the north of the Red Sea, was destroyed in a manner compatible with the description in the Qur'an. Archaeological excavations have revealed that the city lay close to the Dead Sea on the present-day Israeli-Jordanian border. According to scientists, the area is covered in large deposits of sulphur. For this reason, no life in the form of animals or plants is to be found there and the region stands as a symbol of destruction.

Sulphur is an element which appears as a result of volcanic eruptions. Indeed, there is clear evidence in the Qur'an that the method of

destruction was earthquake and volcanic eruptions. The German archaeologist Werner Keller says this about the region:

> Together with the base of this mighty fissure, which runs precisely through this area, the Vale of Siddim, including Sodom and Gomorrah, plunged one day into the abyss. Their destruction came about through a great earthquake which was probably accompanied by explosions, lightning, issue of natural gas and general conflagration… The subsidence released volcanic forces that had been lying dormant deep down along the whole length of the fracture. In the upper valley of the Jordan near Bashan there are still towering craters of extinct volcanoes; great stretches of lava and deep layers of basalt have been deposited on the limestone surface.[243]

These layers of lava and basalt are the most important evidence showing that a volcanic eruption and earthquake once took place there. In any event Lake Lut, otherwise known as the Dead Sea, lies directly above a seismically active region-in other words, an earthquake belt:

> The base of the Dead Sea is located in a tectonic depression-the Rift Valley, which extends 300 kilometres [186 miles] from the Sea of Galilee [Bahr Tabariyeh] in the north to the middle of the Wadi Arabah in the south.[244]

The technical aspect of the disaster suffered by the people of Lut has been revealed in studies carried out by geologists. These have shown that the earthquake which wiped out the people of Lut came about as the result of a very long fault line. The Jordan River drops a total of 180 metres (590 feet) during its 190 km (118 miles) course. This, and the fact that the Dead Sea is 400 metres below sea level, combined to prove that that there once took place a major geological event in and around this area.

This interesting structure of the Jordan River and the Dead Sea comprise only part of the crack or fissure which passes through this region. It begins at the slopes of the Taurus Mountains and runs southward past the southern shores of the Dead Sea, through the Arabian

Desert, reaching the Gulf of Aqaba, from where it crosses the Red Sea before coming to an end in Africa. There is major volcanic activity in those areas through which the line passes. In fact, this occurs to such an extent that black basalt and lava can be found in the Mountains of Galilee in Israel, in part of the high plateaus in Jordan, the Gulf of Aqaba and other areas.

All these remains and geographical features show that there was a major geological event at the Dead Sea.

The December 1957 edition of *National Geographic* contained these statements on the subject:

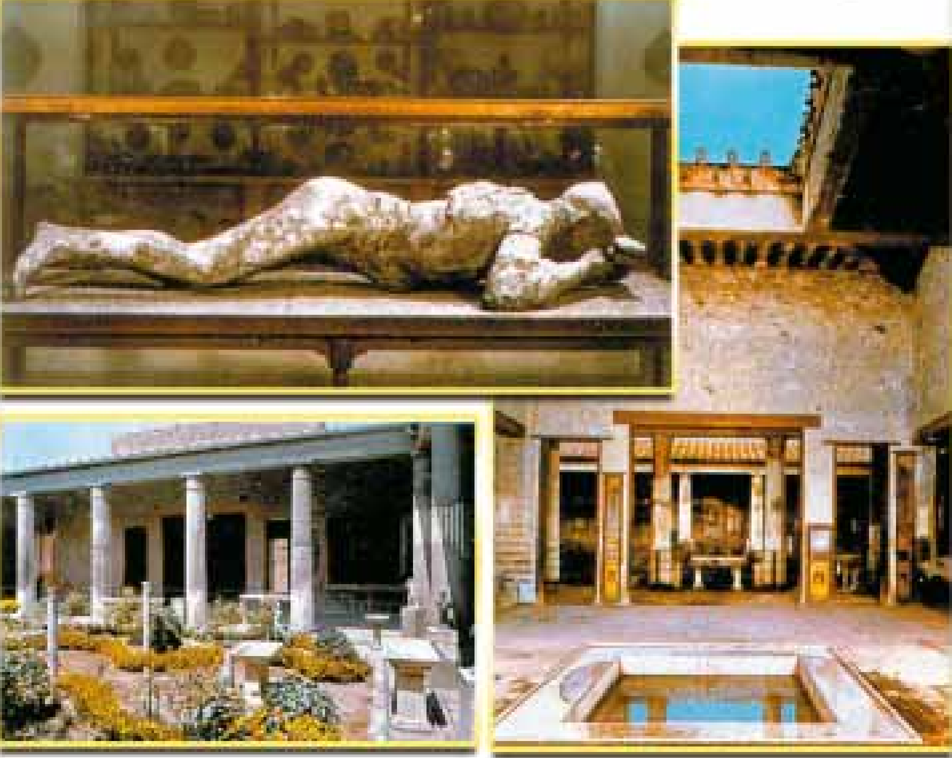
> The mount of Sodom, a barren wasteland, rises sharply above the dead sea. No one has ever found the destroyed cities of Sodom and Gomorrah, but scholars believe that they stood in the Vale of Siddim across from these cliffs. Possibly flood waters of the Dead Sea engulfed them following an earthquake.[245]

One of the pieces of information regarding this destroyed city is-as revealed in Surat al-Hijr 76-that these cities are still on the main line. Geographers have identified this region as being on a line to the south-east of the Dead Sea, extending from the Arabian Peninsula to Syria and Egypt. (See Harun Yahya, *Perished Nations*, Ta-Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002)

> ***We turned the place completely upside down and rained down on them stones of hard-baked clay.* There are certainly signs in that for the discerning. *They were beside a road which still exists.* There is certainly a sign in that for the believers. (Qur'an, 15:74-77)**

A photograph of the Dead Sea





The photographs above show the ancient settlement area around the volcano Mount Vesuvius. It is clear from the remains in the region that the Pompeiians who lived here enjoyed a luxurious and splendid lifestyle. The petrified body on the left is a remain testifying to the disasters that struck the people of Pompeii.

THE PEOPLE OF SABA AND THE ARIM FLOOD

Many centuries ago, the community of Saba was one of the four biggest civilisations which lived in South Arabia.

Historical sources relating to Saba usually say that this was a culture akin to that of the Phoenicians. It was particularly involved in commercial activities. The Sabaeans are recognised by historians as a civilised and cultured people. In the inscriptions of the rulers of Saba, words such as "restore," "dedicate" and "construct" are frequently used. The Ma'rib Dam, which is one of the most important monuments of this people, is an important indication of the technological level this people had reached.

The Sabaean state had one of the strongest armies in the region and was able to adopt an expansionist policy thanks to its potent army. With its advanced culture and army, the Sabaean state was without question one of the "super powers" of the region at the time. This extraordinarily strong army of the Sabaean state is also described in the Qur'an. An expression of the commanders of the Saba army related in the Qur'an, shows the extent of the confidence this army had in itself. The commanders call out to the female ruler (Queen) of the state:

... "We possess strength and we possess great force. But the matter is in your hands so consider what you command." (Qur'an, 27:33)

Because of the Ma'rib Dam which had been constructed, with the help of quite advanced technology for that particular era, the people of Saba possessed an enormous irrigation capacity. The fertile soil they acquired by virtue of this technique and their control over the trade route permitted them a splendid lifestyle, full of well-being. However, instead of giving thanks to Allah for all this, the Qur'an informs us that they actually "turned away from Him." Furthermore, they refused to

heed the warnings and reminders issued to them. Because of these poor moral values, they merited punishment in the sight of Allah and their dams collapsed and the flood of Arim ruined all their lands.

The capital city of the Sabaean state was Ma'rib, which was extremely wealthy thanks to its advantageous geographical position. The capital city was very close to the River Adhanah. The point where the river reached Jabal Balaq was very suitable for the construction of a dam. Making use of this condition, the Sabaean people constructed a dam at this location at the time when their civilisation was first established, and they began irrigation. As a result, they reached a very high level of economic prosperity. The capital city, Ma'rib, was one of the most developed cities of the time. The Greek writer Pliny, who had visited the region and greatly praised it, also mentioned how green this region was.[246]

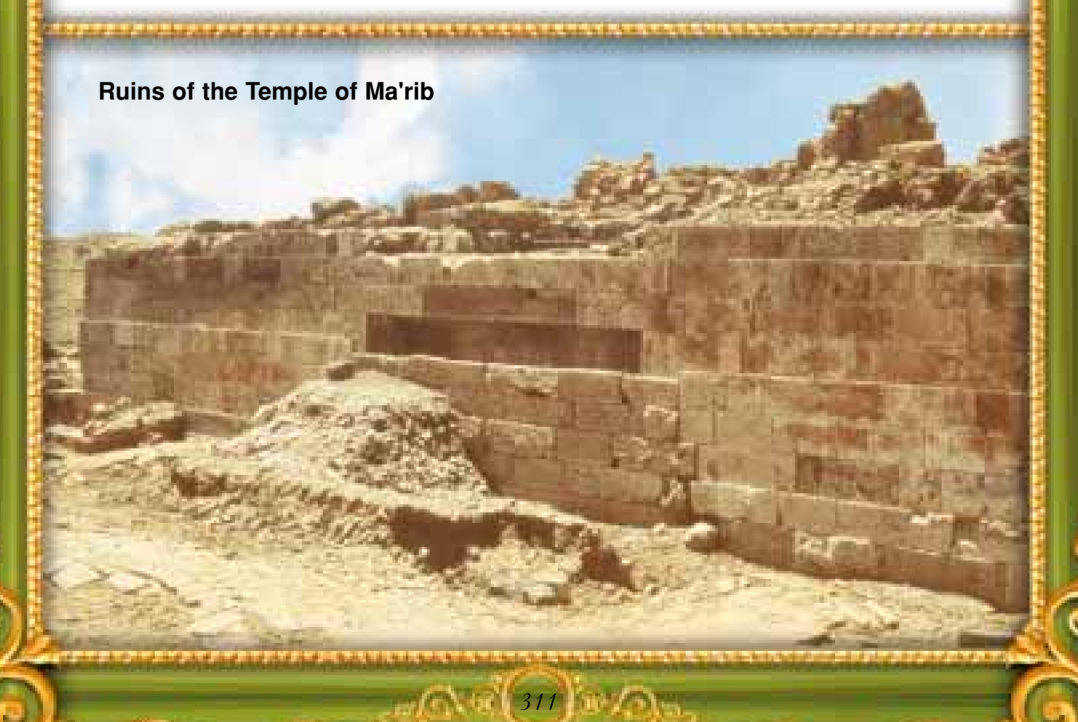
The height of the dam in Ma'rib was 16 metres (52.5 feet), its width was 60 metres (197 feet) and its length was 620 metres (2,034 feet). According to the calculations, the total area that could be irrigated by the dam was 9,600 hectares (37 square miles), of which 5,300 hectares (20.5 square miles) belonged to the southern plain. The remaining part belonged to the northern plain. These two plains were referred to as "Ma'rib and two plains" in the Sabaean inscriptions.[247] The expression in the Qur'an, "**two gardens to the right and to the left**," points to the imposing gardens and vineyards in these two valleys. Thanks to this dam and its irrigation systems, the region became famous as the best irrigated and most fruitful area of Yemen. The Frenchman J. Holevy and the Austrian Glaser proved from written documents that the Ma'rib dam existed since ancient times. In documents written in the Himer dialect, it is related that this dam rendered the territory very productive and was the heartbeat of the economy.

The dam that collapsed in 542 led to the flood of Arim and caused enormous damage. The vineyards, orchards and fields cultivated for hundreds of years by the people of Saba were completely destroyed.

Following the collapse of the dam, the people of Saba appear to have entered a period of rapid contraction, at the end of which the Sabaean state came to an end.

When we examine the Qur'an in the light of the historical data above, we observe that there is very substantial agreement here. Archaeological findings and the historical data both verify what is recorded in the Qur'an. As mentioned in the verse, these people, who did not listen to the exhortations of their Prophet and who rejected faith, were in the end punished with a dreadful flood. This flood is described in the Qur'an in the following verses:

> **There was, for Saba, aforetime, a sign in their home-land-two gardens to the right and to the left. "Eat of the sustenance [provided] by your Lord, and be grateful to Him: a territory fair and happy, and a Lord Oft-Forgiving!" But they turned away [from Allah], and We sent against them the flood [released] from the dams, and We converted their two garden [rows] into "gardens" producing bitter fruit, and tamarisks, and some few [stunted] lote-trees. That was the Requital We gave them because they ungratefully rejected faith: And never do We give [such] requital except to such as are ungrateful rejecters. (Qur'an, 34:15-17)**



Ruins of the Temple of Ma'rib



The Ma'rib Dam (shown in the pictures above and to the side) was one of the major works of the people of Saba. The dam collapsed in the flood of Arim, mentioned in the Qur'an, and the Sabaean state was weakened economically and eventually collapsed.

In the Qur'an, the punishment sent to the Sabaean people is named as "*sayl al-`arim*" which means the "flood of Arim." This expression used in the Qur'an also tells us the manner in which this disaster occurred. The word "*`arim*" means dam or barrier. The expression "*sayl al-`arim*" describes a flood that came about with the collapse of this barrier. Islamic commentators have resolved the issue of time and place being guided by the terms used in the Qur'an about the flood of Arim. For example, Mawdudi writes in his commentary:

> As also used in the expression, sayl al-`arim, the word "`arim" is derived from the word "`ariman" used in the Southern Arabic dialect, which means "dam, barrier." In the ruins unearthed in the excavations made in Yemen, this word was seen to be frequently used in this meaning. For example, in the inscriptions which was ordered by Yemen's Habesh monarch, Ebrehe (Abraha), after the restoration of the big Ma'rib wall in 542 and 543 AD, this word was used to mean dam (barrier) time and again. So, the expression of sayl al-`arim means "a flood disaster which occurs after the destruction of a dam." "**... We converted their two gar-**



den [rows] into gardens producing bitter fruit, and tamarisks, and some few [stunted] lote-trees" (Qur'an, 34:16). That is, after the collapse of the dam-wall, all the country was inundated by the flood. The canals that had been dug by the Sabaean people, and the wall that had been constructed by building barriers between the mountains, were destroyed and the irrigation system fell apart. As a result, the territory, which was like a garden before, turned into a jungle. There was no fruit left but the cherry-like fruit of little stumpy trees.[248]

The Christian archaeologist Werner Keller, writer of "*Und Die Bible Hat Doch Recht*" (The Holy Book Was Right), accepted that the flood of Arim occurred according to the description of the Qur'an and wrote that the existence of such a dam and the destruction of the whole country by its collapse proves that the example given in the Qur'an about the people of the garden was indeed realised.[249]

After the disaster of the Arim flood, the region started to turn into a desert and the Sabaean people lost their most important source of income. Their lands, which had been agricultural havens of prosperity and financial strength, disappeared. The people, who had not heeded the call of Allah to believe in Him and to be grateful to Him, were in the end punished with this disaster. (See Harun Yahya, *Perished Nations*, Ta-Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002)

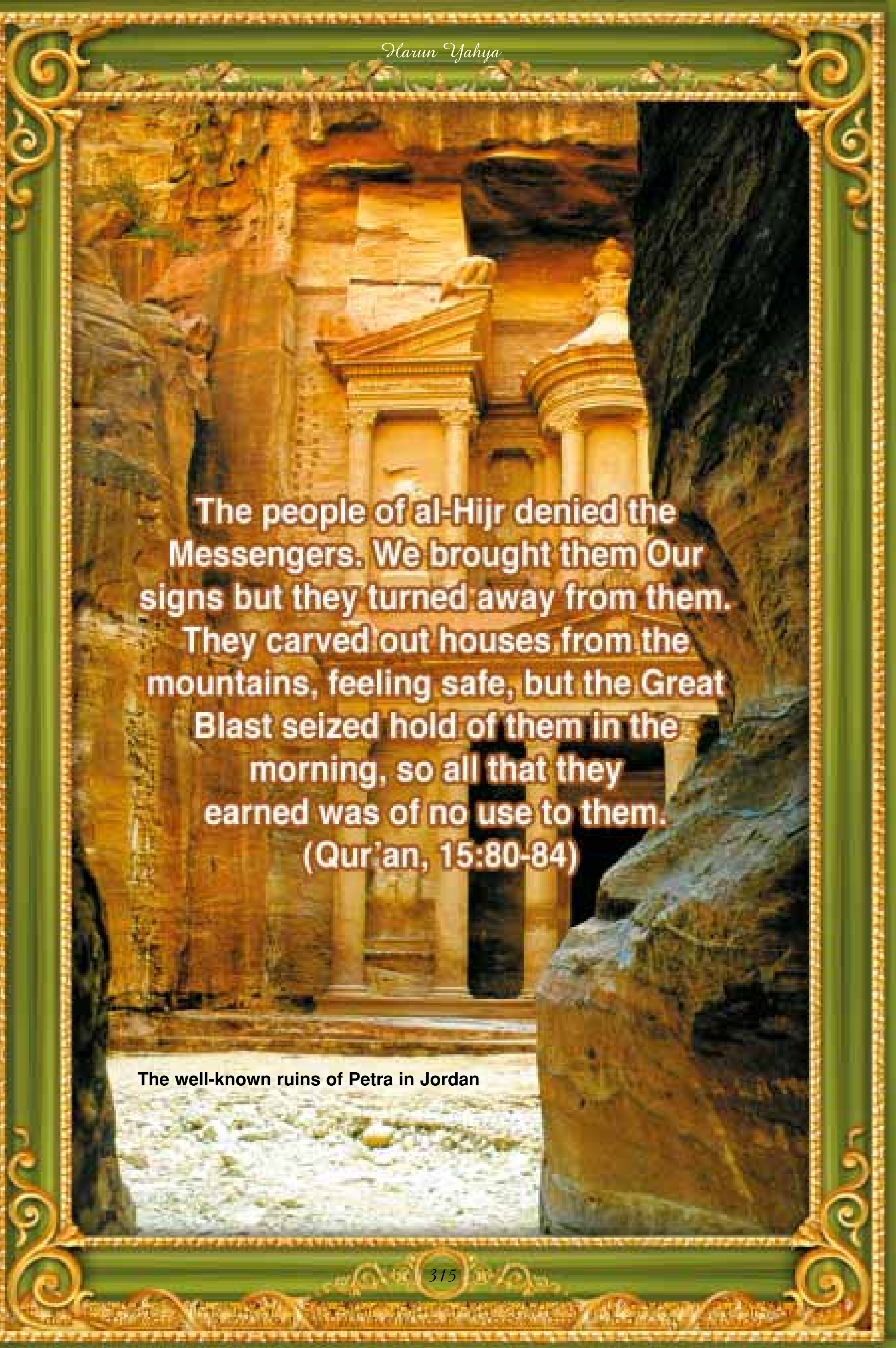
THE PEOPLE OF AL-HIJR

The people of Thamud are a tribe mentioned in the Qur'an about whom a substantial amount is known. Historical sources confirm that a people known as the Thamud existed many years ago. It is believed that the people of al-Hijr referred to in the Qur'an are actually the same people as Thamud, because another name for Thamud is "*Ashaab al-Hijr.*" That being the case, the word "Thamud" may be the name of a people and al-Hijr one of the cities they founded. In fact, this is exactly what is suggested by the descriptions of the Greek geographer Pliny, who wrote that Thamud lived in places called Domotha and Hegra, the present-day city of Hijr.[250]

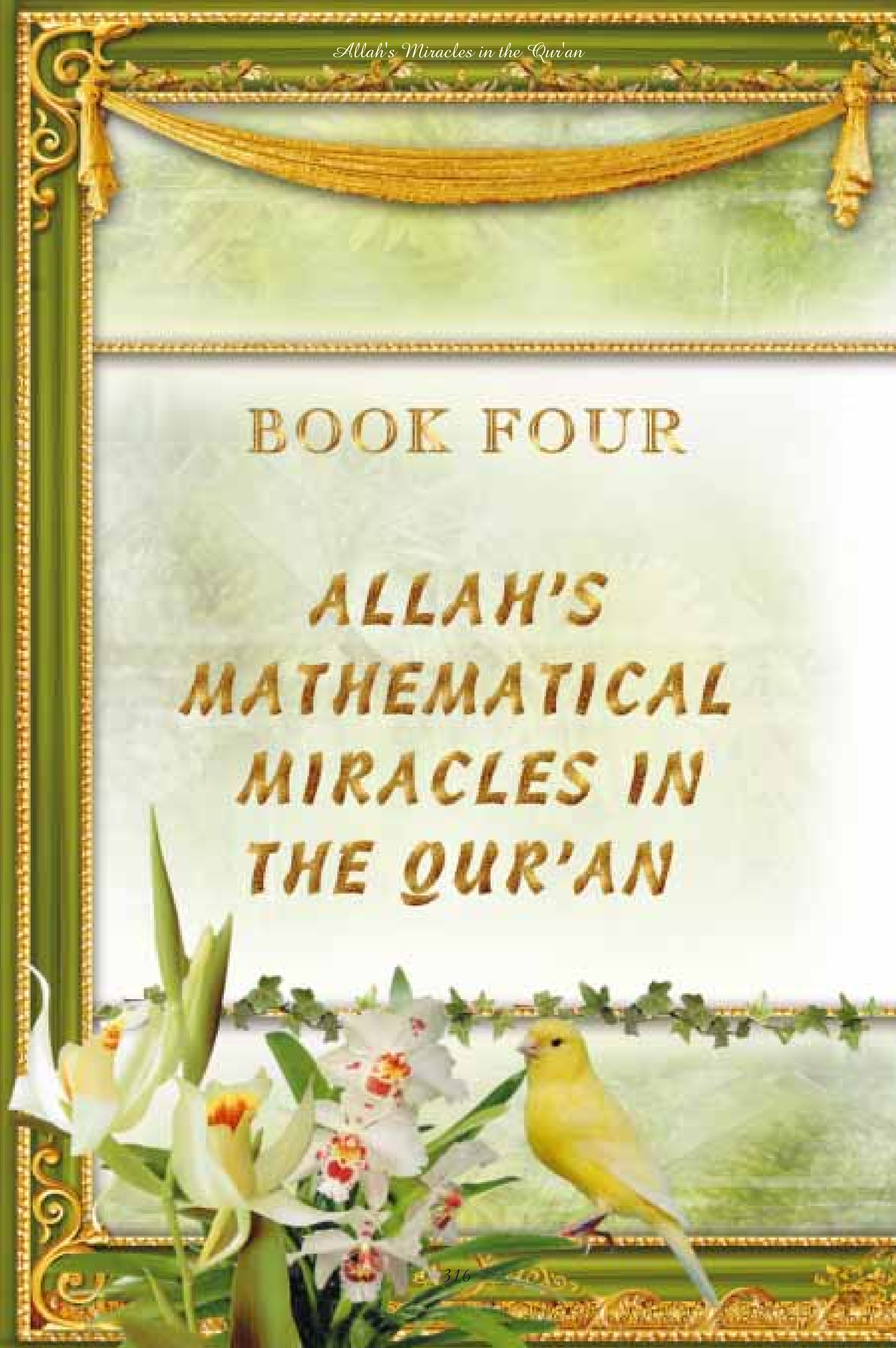
The oldest known historical source to refer to Thamud are the Babylonian state records. They relate the details of the victory of King Sargon II of Babylon over that people in the 8th century B.C. Sargon defeated them in a war in Northern Arabia. The Greeks also mention this people and Aristotle, Ptolemy and Pliny refer to them as the "Thamudaei" i.e. "Thamud."[251] All trace of them vanished before the time of our Prophet (saas) in around 400-600. (See Harun Yahya, *Perished Nations*, Ta-Ha Publishers, UK, 2001; Global Publishing, Istanbul, 2002)

Today, one can see the finest examples of these peoples' stonework in the ancient city of Petra, in southwest Jordan. Indeed, the Qur'an refers to their expertise in stonework thus:

> **[Salih said to his people,] "Remember when He appointed you successors to 'Ad and settled you in the land. You built palaces on its plains and *carved out houses from the mountains*. Remember Allah's blessings and do not go about the earth, corrupting it." (Qur'an, 7:74)**



The well-known ruins of Petra in Jordan


BOOK FOUR
ALLAH'S MATHEMATICAL MIRACLES IN THE QUR'AN

WORD REPETITIONS IN THE QUR'AN

Apart from the miraculous characteristics of the Qur'an which we have looked into so far, it also contains what we can term "mathematical miracles." There are many examples of this fascinating Qur'anic aspect. One example of this is the number of repetitions of certain words in the Qur'an. Some related words are surprisingly repeated the same number of times. Below is a list of such words and the number of repetitions in the Qur'an.

- The statement of "seven heavens" (*saba`a samawaat*) is repeated seven times. "The creation of the heavens" (*khalq al-samawaat*) is also repeated seven times.

SEVEN HEAVENS	7 times
THE CREATION OF THE HEAVENS	7 times



- "Day (*yawm*)" is repeated 365 times in singular form, while its plural and dual forms "days" (*ayyaam and yawmayn*) together are repeated 30 times. The number of repetitions of the word "month" (*shahar*) is 12.

DAY	yawm	365 times
DAYS	ayyaam,yawmayn	30 times
MONTH	shahar	12 times

- The number of repetitions of the words "plant" and "tree" is the same: 26

PLANT	26 times
TREE	26 times

- The word "payment or reward" is repeated 117 times, while the expression "forgiveness" (*mughfirah*), which is one of the basic morals of the Qur'an, is repeated exactly twice that amount, 234 times.

PAYMENT	117 times
FORGIVENESS	2x117=234 times

- When we count the word "Say," we find it appears 332 times. We arrive at the same figure when we count the phrase "they said."

SAY	332 times
THEY SAID	332times

- The number of times the words, "world" (*dunyaa*) and "Hereafter" (*aakhirah*) are repeated is also the same: 115

WORLD	115 times
HEREAFTER	115 times

- The word "satan" (*shaytaan*) is used in the Qur'an 88 times, as is the word "angels" (*mala'ikah*).

SATAN	88 times
ANGELS	88 times

- The word "faith" (*eemaan*) (without genitive) is repeated 25 times throughout the Qur'an as is also the word "infidelity" (*kufr*).

FAITH	25 times
INFIDELITY	25 times

- The words "Paradise" and "Hell" are each repeated 77 times.

PARADISE	77 times
HELL	77 times

- The word "*zakaah*" is repeated in the Qur'an 32 times and the number of repetitions of the word "blessing" (*barakah*) is also 32.

ZAKAAH	32 times
BLESSING	32 times

- The expression "the righteous" (al-abraar) is used 6 times and "the wicked" (al-fujjaar) is used half as much, i.e., 3 times.

THE RIGHTEOUS	al-abraar	6 times
THE WICKED	al-fujjaar	3 times

- The number of times the words "summer-hot" and "winter-cold" are repeated is the same: 5.

SUMMER-HOT	1 + 4 = 5 times
WINTER-COLD	1 + 4 = 5 times

- The words "wine" (*khamr*) and "intoxication" (*saqara*) are repeated in the Qur'an the same number of times: 6

WINE	khamr	6 times
INTOXICATION	saqara	6 times

- The number of appearances of the words "mind" and "light" is the same: 49.

MIND	49 times
LIGHT	49 times

- The words "tongue" and "sermon" are both repeated 25 times.

TONGUE	25 times
SERMON	25 times

- The words "benefit" and "corrupt" both appear 50 times.

BENEFIT	50 times
CORRUPT	50 times

- "Reward" (*ajr*) and "action" (fa`il) are both repeated 107 times.

REWARD	107 times
ACTION	107 times

- "Love" (*al-mahabbah*) and "obedience" (*al-taa`ah*) also appear the same number of times: 83

LOVE	83 times
OBEDIENCE	83 times

- The words "refuge" (*maseer*) and "forever" (*abadan*) appear the same number of times in the Qur'an: 28.

REFUGE	28 times
FOREVER	28 times

- The words "disaster" (*al-museebah*) and "thanks" (*al-shukr*) appear the same number of times in the Qur'an: 75.

DISASTER	75 times
THANKS	75 times

- "Sun" (*shams*) and "light" (*noor*) both appear 33 times in the Qur'an.

◆ In counting the word "light" only the simple forms of the word were included.

SUN	shams	33 times
LIGHT	noor	33 times

- The number of appearances of "right guidance" (*al-hudaa*) and "mercy" (*al-rahmah*) is the same: 79

RIGHT GUIDANCE	79 times
MERCY	79 times

- The words "trouble" and "peace" are both repeated 13 times in the Qur'an.

TROUBLE	13 times
PEACE	13 times

- The words "man" and "woman" are also employed equally: 23 times.

The number of times the words "man" and "woman" are repeated in the Qur'an, 23, is at the same time that of the chromosomes from the egg and sperm in the formation of the human embryo. The total number of human chromosomes is 46; 23 each from the mother and father.

WOMAN	23 times
MAN	23 times

- "Treachery" (*khiyaanah*) is repeated 16 times, while the number of repetitions of the word "foul" (*khabeeth*) is 16.

TREACHERY	16 times
FOUL	16 times

- "Human being" is used 65 times: the sum of the number of references to the stages of man's creation is the same: i.e.

HUMAN BEING		**65** times
SOIL	turaab	17 times
DROP OF SPERM	nutfah	12 times
EMBRYO	`alaq	6 times
A HALF FORMEND LUMP OF FLESH	meda'a	3 times
BONE	`idham	15 times
FLESH	lahm	12 times
TOTAL		**65 times**

- The word "*salaawaat*" appear five times in the Qur'an, and Allah has commanded man to perform the prayer (*salat*) five times a day.
- The word "land" appears 13 times in the Qur'an and the word "sea" 32 times, giving a total of 45 references. If we divide that number by that of the number of references to the land we arrive at the figure 28.888888888889%. The number of total references to land and sea, 45, divided by the number of references to the sea in the Qur'an, 32, is 71.111111111111%. Extraordinarily, these figures represent the exact proportions of land and sea on the Earth today.[252]

NUMEROLOGICAL CALCULATIONS (ABJAD) IN THE QUR'AN

Every letter in the Arabic alphabet has a numerical (gematrical) value. In other words, in Arabic every letter stands for a number. A number of calculations can be made from this basis. These are referred to as numerological (*abjad*) calculations or "*hisaab al-jummal*."[253] Muslims who took advantage of the fact that every letter of the alphabet represents a number have used this in a number of fields. *Ilm al-jafr* is one of these.

Jafr is the science of foretelling what is likely to happen in the future. One of the methods employed by people who engage in this is to compare symbolic forms and letters' numerological values. The main difference between "*abjad*" and "*jafr*" methods is that the former refers to what has already taken place and the latter to what is likely to take place in the future.[254]

Table of Sequential & Gematrical Values of the Arabic Alphabet

Sequential Value	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Arabic Letters	ا	ب	ج	د	ه	و	ز	ح	ط	ي	ك	ل	م	ن
English	alif	ba	jeem	dal	ha	wow	zany	ha	ta	ya	kaf	lam	meem	noon
Gematrical Value	1	2	3	4	5	6	7	8	9	10	20	30	40	50
Sequential Value	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Arabic Letters	س	ع	ف	ص	ق	ر	ش	ت	ث	خ	ذ	ض	ظ	غ
English	seen	'ayn	fa	sod	qaf	ra	seen	ta	tha	kha	thal	dod	za	ghayn
Gematrical Value	60	70	80	90	100	200	300	400	500	600	700	800	900	1000

This method of calculation is a form of writing which goes back several centuries and which was widely used before the revelation of the Qur'an. Everything which happened in Arab history was written down by attributing numerical values to letters thus the date of every event was recorded. These dates were obtained by adding up the particular numerical values of every letter employed.

When certain verses of the Qur'an are examined in the light of the "*abjad*" method, we see that a number of dates emerge which are fully in accordance with the meanings of those verses. When we see that things referred to in these verses actually happened on the dates obtained by this method, we understand that there is a secret indication regarding those events in the verses. (Allah knows best.)

The 1969 Moon Landing is Indicated in the Qur'an



The Hour has drawn near and the Moon has split. (Qur'an, 54:1)

The Arabic word "*inshaqqa*" (split) used in the above verse is derived from the word "*shaqqa*," which can also be used to mean "causing something to rise, ploughing or digging the soil":



We pour down plentiful water, then split the earth into furrows. Then We make grain grow in it, and grapes and herbs and olives and dates and luxuriant gardens and orchards and meadows. (Qur'an, 80:25-31)

As we can see, the word "*shaqqa*" in the above verse is not being used in the sense of "dividing into two" but of "slicing through the soil, reaping various crops." When evaluated in this sense, the meaning of the word "*shaqqa*" in the expression "**the Moon has split**" (Qur'an, 54:1) can also be seen to be referring to the 1969 moon landing and the studies performed on the Moon land. (Allah knows best.) In fact, there is another very important indication here: Some of the "*abjad*" values of

certain words in this verse in Surat al-Qamar also point to the figure 1969.

One important point which needs to be stressed in this method of calculation is the likelihood of producing very large or irrelevant numbers. Despite the probability of a relevant number emerging being exceedingly small, it is striking that such a clear figure should result.

The Hour [has drawn near] and the Moon has split.

Hijri: 1390, Gregorian: 1969 ٱلسَّاعَةُ وَٱنشَقَّ ٱلْقَمَرُ

The phrase "has drawn near" is not included in the count, since it comes at the end in the Arabic.

In 1969, American astronauts carried out research on the Moon, dug the soil up with various pieces of equipment, split it and carried specimens back to Earth.

We must, however, make it clear that the splitting of the Moon is of course one of the miracles given to our Prophet (saas) by Allah. This miracle is revealed thus in a hadith:

The people of Mecca asked Allah's messenger (saas) to show them a miracle. So he showed them the Moon split in two halves between which they saw the Hiram' mountain. (Sahih Bukhari)

The above miracle is the splitting of the Moon revealed in the verse. However, since the Qur'an is a Book that addresses all times, one may think of this verse as referring to the exploration of the Moon in our own day. (Allah knows best.)

ا		ل		س		ا		ع		ة
1	+	30	+	60	+	1	+	70	+	400
و		ا		ن		ش		ق		
6	+	1	+	50	+	300	+	100		
ا		ل		ق		م		ر		
1	+	30	+	100	+	40	+	200		

TOTAL: 1390 (GREGORIAN 1969)

THE MIRACLE OF 19 IN THE QUR'AN

Another mathematical miracle of the Qur'an is the manner in which the number 19 is numerologically encoded in verses. This number is stressed in the words of the Qur'an: "**There are nineteen in charge of it.**" (Qur'an, 74:30), and is encoded in various places in the Book. Some examples of this can be listed as follows:

- The formula consists of 19 letters.



ب	1st letter	ا	8th letter	ل	15th letter
س	2nd letter	ل	9th letter	ر	16th letter
م	3rd letter	ر	10th letter	ح	17th letter
ا	4th letter	ح	11th letter	ى	18th letter
ل	5th letter	م	12th letter	م	19th letter
ل	6th letter	ن	13th letter		
ه	7th letter	ا	14th letter		

- The Qur'an consists of 114 (19 x 6) Suras.
- The first Sura to be revealed (Sura 96) is the 19th from the end.
- The first verses of the Qur'an to be revealed are the first five verses of Sura 96 and the total number of words in these verses is 19.

خَلَقَ	الَّذِى	رَبِّكَ	بِاسْمِ	اِقْرَأْ
5th word	4th word	3rd word	2nd word	1st word

عَلَقٍ	مِنْ	الْاِنْسَانَ	خَلَقَ
9th word	8th word	7th word	6th word

الْاَكْرَمُ	رَبُّكَ	وَ	اِقْرَأْ
12th word	11th word		10th word

بِالْقَلَمِ	عَلَّمَ	الَّذِى
15th word	14th word	13th word

لَمْ يَعْلَمْ	مَا	الْاِنْسَانَ	عَلَّمَ
19th word	18th word	17th word	16th word

As we have seen, the first five verses consist of 19 words. The " و " is a letter, not a word. Likewise, letters " ب " are not included in the calculation either.

- The first Sura to be revealed, Surat al-'Alaq, consists of 19 verses and 285 (19 x 15) letters.
- Surat an-Nasr, the final Sura to be revealed, consists of a total of 19 words.

وَالْفَتْحُ	اللّٰهِ	نَصْرُ	جَآءَ	اِذَا
5th word	4th word	3rd word	2nd word	1th word

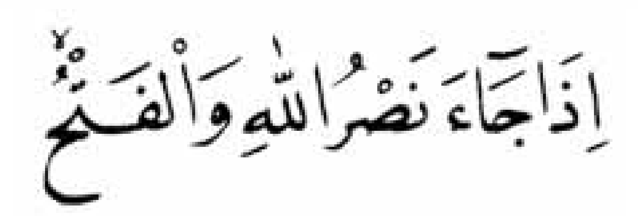
دِينِ	فِي	يَدْخُلُونَ	النَّاسَ	وَرَاَيْتَ
10th word	9th word	8th word	7th word	6th word

اَفْوَاجًا	اللّٰهِ
12th word	11th word

وَاسْتَغْفِرْهُ	رَبِّكَ	بِحَمْدِ	فَسَبِّحْ
16th word	15th word	14th word	13th word

تَوَّابًا	كَانَ	اِنَّهُ
19th word	18th word	17th word

Furthermore, the first verse of Surat an-Nasr, which speaks of the help of Allah, contains 19 letters.



ا	1st letter	ص	8th letter	ا	15th letter
ذ	2nd letter	ر	9th letter	ل	16th letter
ا	3rd letter	ا	10th letter	ف	17th letter
ج	4th letter	ل	11th letter	ت	18th letter
ا	5th letter	ل	12th letter	ح	19th letter
ء	6th letter	ه	13th letter		
ن	7th letter	و	14th letter		

- There are 114 formulas in the Qur'an or 19 x 6.
- A total of 113 Suras in the Qur'an start with the formula. The only Sura not to start with one is the ninth, Surat at-

Tawba. Surat an-Naml is the only Sura to have two formulas. One of these is at the beginning and the other in verse 30. Counting from Surat at-Tawba, which does not begin with the formula, Surat an-Naml follows 19 Suras on.

SURA NUMBER	SURA NAME	
1	al-Fatiha	
2	al-Baqara	
3	al 'Imran	
4	an-Nisa'	
5	al-Ma'ida	
6	al-An'am	
7	al-A'raf	
8	al-Anfal	
9	at-Tawba	1
10	Yunus	2
11	Hud	3
12	Yusuf	4
13	ar-Ra'd	5
14	Ibrahim	6
15	al-Hijr	7
16	an-Nahl	8
17	al-Isra'	9
18	al-Kahf	10
19	Maryam	11
20	Ta Ha	12
21	al-Anbiya'	13
22	al-Hajj	14
23	al-Muminun	15
24	an-Nur	16
25	al-Furqan	17
26	ash-Shu'ara'	18
27	an-Naml	19
28	al-Qasas	
29	al-'Ankabut	
30	ar-Rum	
31	Luqman	
32	as-Sajda	
33	al-Ahzab	
34	Saba'	
35	Fatir	
36	Ya Sin	
37	as-Saffat	
38	Sâd	

Surat at-Tawba is the only Sura with no formula at the beginning.

The number of Suras in-between is 19.

In addition to the formula at the beginning of Surat an-Naml, there is a second one in verse 30.

There is a formula at the beginning of the 27th Sura, Surat an-Naml, and in verse 30. There are thus two formulas in the 27th Sura. It is the formula in the 30th verse of the 27th Sura which completes the total of 114 formulas in the Qur'an. When we add together the number of the verse and the number of the Sura, 30 and 27, we find the number 57 (19 x 3).

The total number of Suras from Surat at-Tawba (9) to Surat an-Naml (27) is 342 (9 + 10 + 11 +12 +13 +14 +15 +16 + 17 + 18 + 19 + 20 + 21 + 22 + 23 + 24 + 25 + 26 + 27). That figure is 19 multiplied by 18.

- The sum of all the occurrences of the name "Allah" in all the verses whose numbers are multiples of 19 (i.e., verses 19, 38, 57, 76, etc.) is 133, or 19 x 7.
- The "*abjad*" value of the word "*wahd*" meaning "one" is 19. This word is used with various other words in the Qur'an, such as one door, one variety of food. It is used 19 times together with the name "Allah."

(The Arabic letters are shown here without the accent marks)	Letters of the word "*wahd*"	Numerical Values of the Letters
و	W	6
ا	A	1
ح	H	8
د	D	4
Total *abjad* value of the word		19

- The total of the Sura and verse numbers of the occasions when the word "*wahd*" appears 19 times is 361: (19 x 19).
- The Arabic word "*wahdahu*," meaning "worship only Allah," appears in the verses 7:70, 39:45, 40:12, 40:84 and 60:4. When these figures are added up without numbers being repeated, the resulting total is 361 (19 x 19).
- The number of verses between the first initial letters (Alif, Lam, Mim; Surat al-Baqara 1) and the final initial letters (Nun; Surat al-Qalam 1) is 5,263 (19 x 277).
- There are 38 (19 x 2) Suras without initial letters between the first Sura which has initial letters and the last to have them.
- The word "*Rahman*" (All-Merciful) appears 57 (19 x 3) times in the Qur'an.
- Thirty different numbers are mentioned in the Qur'an.

1	7	19	70	1.000
2	8	20	80	2.000
3	9	30	99	3.000
4	10	40	100	5.000
5	11	50	200	50.000
6	12	60	300	100.000

The total of these numbers (again without taking repetitions into account) is 162,146. This is 19 x 8,534:

1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 19 +20 + 30 + 40 + 50 + 60 + 70 + 80 + 99 + 100 + 200 + 300 + 1,000 + 2,000 + 3,000 + 5,000 + 50,000 + 100,000 = **162,146** (19 x 8,534).

- In addition to these thirty numbers, the Qur'an also refers to eight fractions: 1/10, 1/8, 1/6, 1/5, 1/4, 1/3, 1/2 and 2/3. The Qur'an thus contains a total of 38 (19 x 2) different numbers.
- The Sura from the beginning to possess 19 verses is Surat al-Infitar. Another feature of this Sura is that its final word is "Allah." At the same time, this is the 19th appearance of the name "Allah" from the end.
- The 50th Sura, which begins with the letter Qaf, contains a total of 57 (19 x 3) letters Qaf. There are also 57 letters Qaf in the 42nd Sura with a letter Qaf at the beginning. The 50th Sura contains 45 verses. Added together, these total 95 (19 x 5). There are 53 verses in the 42nd Sura. These again total 95 (42 + 53).

50th Sura	57 (19 x 3) Letter Qaf
42nd Sura	57 (19 x 3) Letter Qaf

50th Sura	45th verse	50+45=95 (19 x 5)
42nd Sura	53rd verse	42+53=95 (19 x 5)

- The *abjad* value of the word "*Majeed*," used for the Qur'an, in the first verse of Surah Qaf is 57 (19 x 3). As we have stated above, the total number of letters Qaf is also 57.
- When we add together the number of times that the letter Qaf appears in the Qur'an, we reach a total of 798 (19 x 42). Forty-two is the number of another Sura with Qaf among its initial letters.
- The letter Nun appears at the beginning of only the 68th Sura. The total number of times it appears in that Sura is 133 (19 x 7).
- When we add together the number of verses (including the formulas) in Suras the number of which are multiples of 19, the following is noteworthy:

	SURA NUMBER	NUMBER OF VERSES
19 x 1	19th Sura	99
19 x 2	38th Sura	89
19 x 3	57th Sura	30
19 x 4	76th Sura	32
19 x 5	95th Sura	9
19 x 6	114th Sura	7
TOTAL		266 (19 x 14)

- The letters Ya and Sin appear at the beginning of Surah Ya Sin. The letter Sin appears 48 times in Surah Ya Sin and the letter Ya 237 times. The total of these letters is 285 (19 x 15).

- Only one Sura, the seventh, begins with the initial letters "Alif, Lam, Mim, Sad." The letter Alif appears in this Sura 2,529 times, the letter Lam 1,530 times, the letter Mim 1,164 times and the letter Sad 97 times. These four letters thus appear a total of 2,529 + 1,530 + 1,164 + 97 times, or 5,320 (19 x 280) times.

- The letters Alif, Lam and Mim are the most frequently used letters in Arabic. They appear together at the beginning of six Suras: numbers 2, 3, 29, 30, 31 and 32. The number of times these three letters appear in each of these six Suras is a multiple of 19. In order: 9,899 (19 x 521), 5,662 (19 x 298), 1,672 (19 x 88), 1,254 (19 x 66) and 817 (19 x 43). The total number of times all these three letters appear in the six Suras is 19,874 (19 x 1,046).

- The initial letters Alif, Lam and Ra appear in Suras 10, 11, 12, 14 and 15. The total number of times these letters appear in these Suras is 2,489 (19 x 131), 2,489 (19 x 131), 2,375 (19 x 125), 1,197 (19 x 63) and 912 (19 x 48).

- The frequency with which the initial letters Alif, Lam, Mim and Ra appear is 1,482 (19 x 78) in total. The letter Alif appears 605 times, Lam 480 times, Mim 260 times and Ra 137 times.

- The initial letters Qaf, Ha, Ya, 'Ayn and Sad appear in only one Sura, the 19th. The letter Qaf appears 137 times in this Sura, Ha 175 times, Ya 343 times, 'Ayn 117 times and Sad 26 times. The total number of appearances of these five letters is 137 + 175 + 343 + 117 + 26 = 798 (19 x 42).

Other findings on this subject include:

In the whole of the Qur'an,

- the word "*atee*`" (obey!) appears 19 times,

- the words "`*abd*" (servant), "`*aabid*" (a person who serves) and "`*abudu*" (worship) appear a total of 152 (19 x 8) times,

- The numerical *abjad* values of some of the names of Allah given below are also multiples of 19:

- *Al-Waahid* (The One) 19 (19 x 1)

- *Al-Jaami*` (The Gatherer) 114 (19 x 6)

19: AN EXTRAORDINARY NUMBER

- The number 19 is the total of the numbers 9 and 10 to the power of 1. The difference between the numbers 9 and 10 to the power of 2 is again 19.

10^1	10 + 9	19
10^2	100 - 81	19

- The Sun, Moon and Earth line up in the same relative positions once every 19 years. [255]
- Halley's Comet passes through the Solar System once every 76 years (19 x 4).[256]

The place of the number 19 in the Pascal triangle

- The total of the first 19 figures in the Pascal triangle is 38 (19 x 2).

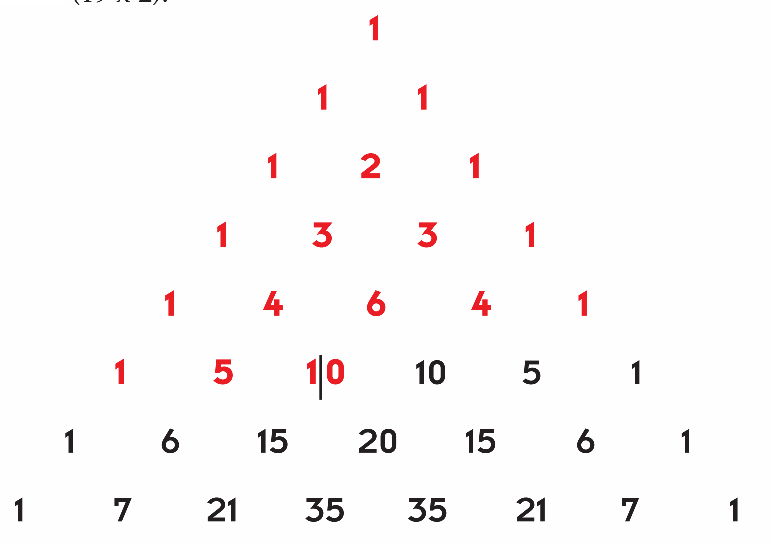


Figure 1: The first 19 figures

Pascal's triangle is an arithmetical one used in algebra and probability calculations.

- The total of the first 19 numbers in the Pascal triangle is 57 (19 x 3).

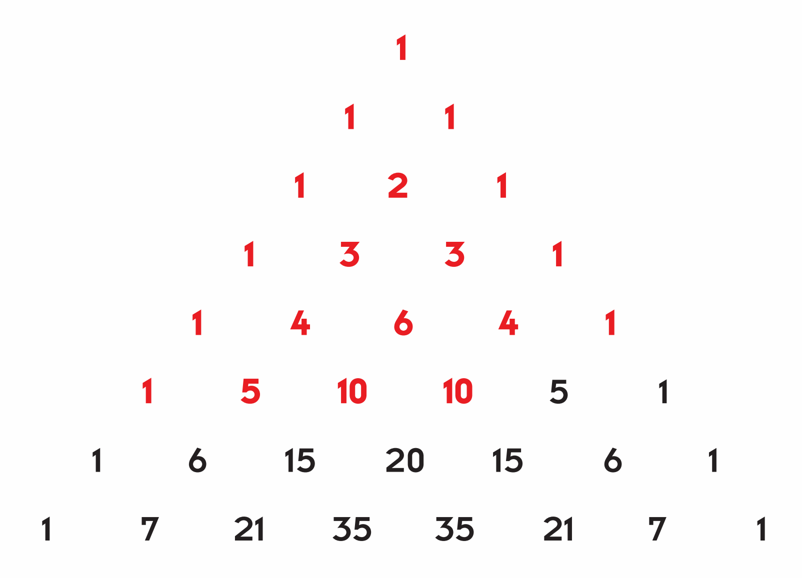


Figure 2: The first 19 figures

- Conclusion:

  The total of the first 19 figures is a multiple of 19.

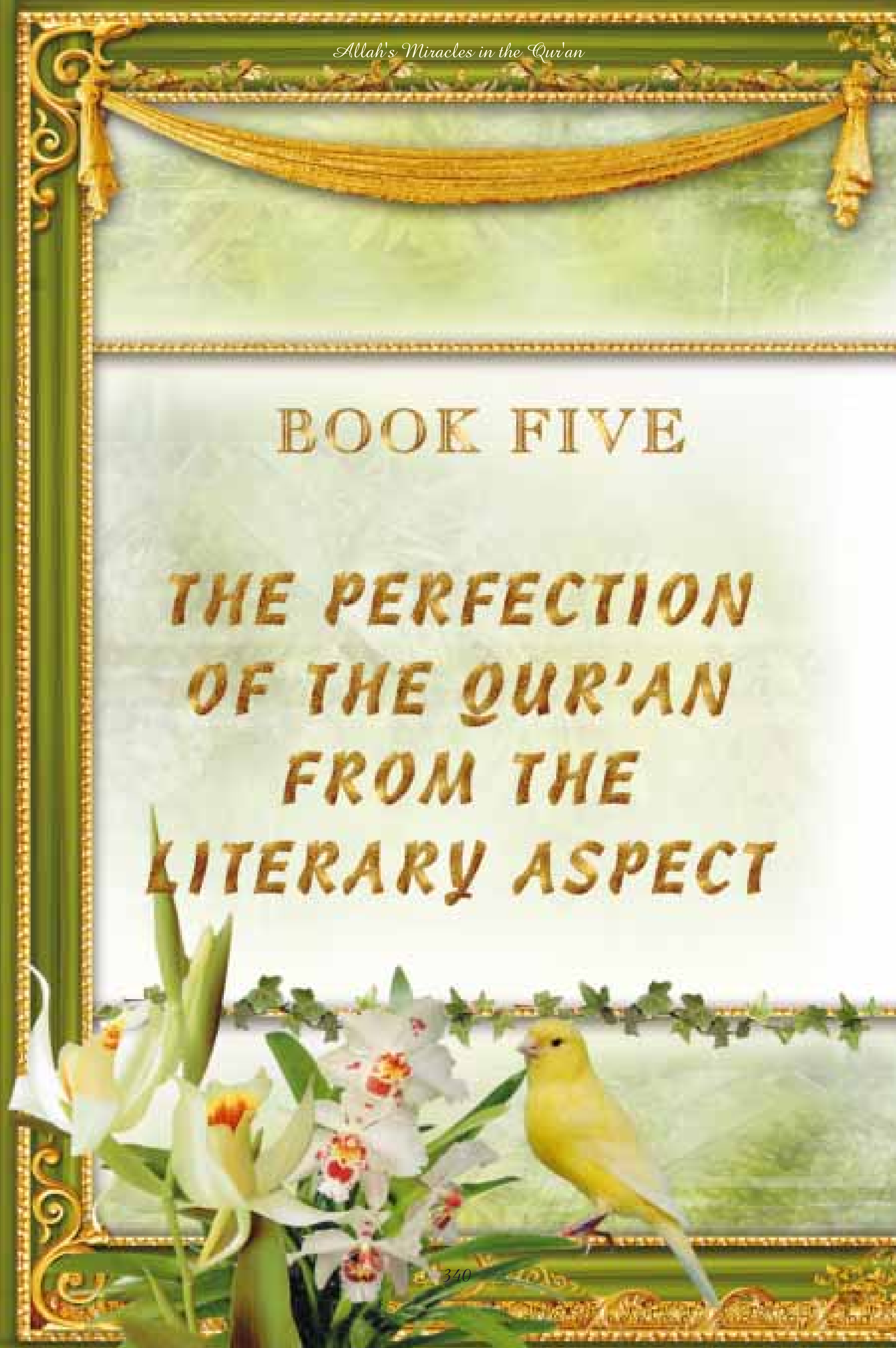
  The total of the first 19 numbers is a multiple of 19.

The connection between the number 19 and the Pascal triangle with regard to the revelation sequence of the Qur'anic verses

- The 96th Sura, the first revealed, comes 19 before the end. It consists of 19 verses and contains a total of 285 letters (19x15). The first five verses of the revelation contain 76 (19 x 4) letters.
- The first verses of the 68th Sura, the second to be revealed, consist of 38 (19 x 2) words.
- The third revelation, the 73rd Sura, contains 57 (19 x 3) words.

It [the Qur'an] is simply a reminder to all the worlds. You will certainly know the truth of it after a while.
(Qur'an, 38:87-88)





BOOK FIVE

THE PERFECTION OF THE QUR'AN FROM THE LITERARY ASPECT

THE INIMITABILITY OF THE QUR'AN

We have so far considered the miraculous characteristics of the Qur'an from the scientific and historical points of view. In addition to these, the Qur'an also possesses an astounding, inimitable style from the literary perspective.

It first needs to be stated that the exposition in the Qur'an addresses all human groupings from all ages. No matter what the reader's education and cultural level, the Qur'an is written in a clear, comprehensible language which can be understood by everyone. In one verse, Allah reveals the following about the Qur'an:

We have made the Qur'an easy to remember… (Qur'an, 54:22)

Despite having such an easily comprehensible style, it has never been possible to imitate the Qur'an from any point of view. Some of the verses in which Allah draws attention to the inimitable nature of the Qur'an are:

If you have doubts about what We have sent down to Our servant, pro-



duce another sura equal to it, and call your witnesses, besides Allah, if you are telling the truth. (Qur'an, 2:23)

Do they say, "He has invented it"? Say: "Then produce a sura like it and call on anyone you can besides Allah if you are telling the truth." (Qur'an, 10:38)

One of the reasons that the Qur'an is described as miraculous stems from the fact that, as emphasized in the verses above, nothing like it can ever be written by human endeavour: The greater the scale of that impossibility, the greater the size of the miracle which we see before our very eyes. Therefore, the fact that the style of the Qur'an has been incapable of imitation by even one out of the billions of people down the centuries is one of the proofs of its miraculous nature. In his book, *The Construction of the Bible and the Qur'an*, F. F. Arbuthnot makes the following comment about the Qur'an:

> From the literary point of view, the Koran is regarded as a specimen of the purest Arabic, written on half poetry and half prose. It has been said that in some cases grammarians have adopted their rules to agree with certain phrases and expressions used in it, and that though several attempts have been made to produce a work equal to it as far elegant writing is concerned, none has as yet succeeded.[257]

The words employed in the Qur'an are exceedingly special, both in terms of meaning and also of fluency and effect of style. However, those who are unwilling to believe that the Qur'an is a holy book in which Allah has revealed His commandments and prohibitions, have come up with a variety of excuses as to why they should not follow it. They have attempted to take refuge from its beauty by turning to denial. Allah reveals the following about the unbelievers' descriptions of the Qur'an:

We did not teach him poetry nor would it be right for him. It is simply a reminder and a clear Qur'an so that you may warn those who are truly alive and so that the word may be carried out against the unbelievers. (Qur'an, 36:69-70)

The Superior Nature of the Rhyming Scheme in the Qur'an

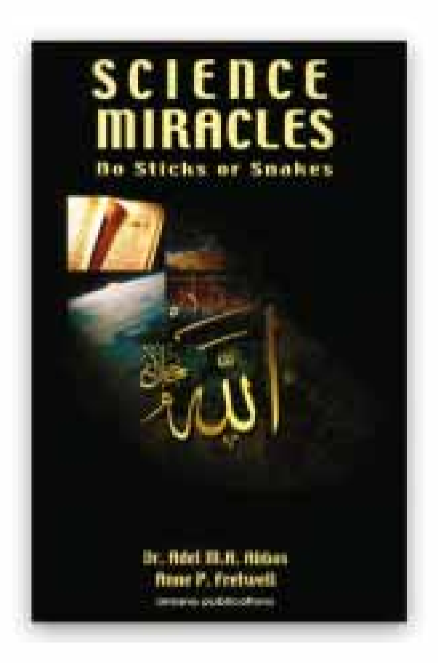
Another of the elements which make the Qur'an inimitable stems from its literary structure. Despite being in Arabic, the Qur'an bears no similarity to the forms used in Arabic literature.

The rhyming system in the Qur'an is known as "rhymed prose" and linguists describe the use of this rhyme in the Qur'an as a miracle. In his book *Science Miracles*, a work prepared to demonstrate that the Qur'an is a linguistic miracle, the well-known British scientist Professor Adel M. A. Abbas carried out a wide-ranging study of the letters and rhyming scheme used in the Qur'an by means of graphics and diagrams. Some rather striking facts were established in this book with regard to the rhyming system in the Qur'an.

As we know, 29 Suras in the Qur'an begin with one or more symbolic letters. These letters are known as "*muqatta`ah*-letters" or "initial letters." Fourteen of the 29 letters in Arabic comprise these initial letters: Qaf, Sad, Ta, Ha, Ya, Sin, Alif, Lam, Mim, Kaf, 'Ayn, Nun, Ra, Ha.

Of these letters, when we look at the use of the letter "Nun" in Surat al-Qalam we see rhyming with the letter "Nun" in 88.8% of the verses. 84.6% of Surat ash-Shu'ara', 90.32% of Surat an-Naml and 92.05% of Surat al-Qasas are rhymed with "Nun."

When applying these studies to the whole Qur'an, 50.08% is rhymed with the letter "Nun." To put it another way, more than



Prof. Adel M. A. Abbas' book,
Science Miracles

half the verses in the Qur'an end with the letter "Nun." In no literary work of comparable length has it been possible to rhyme with a single sound in more than half the text. This applies to all languages, not just to Arabic.

Distribution of verses ending with the letter "Nun" from those suras beginning with initial letters:

Verse number	Name of Sura	Number of letter "Nun"
2	al-Baqara	193
3	al 'Imran	121
7	al-A'raf	193
10	Yunus	98
11	Hud	56
12	Yusuf	93
13	ar-Ra'd	5
14	Ibrahim	6
15	al-Hijr	81
19	Maryam	5
20	Ta Ha	-
26	ash-Shu'ara'	192
27	an-Naml	84
28	al-Qasas	81
29	al-'Ankabut	59
30	ar-Rum	54
31	Luqman	7
32	as-Sajda	27
36	Ya Sin	71
38	Sâd	18
40	Ghafir	32
41	Fussilat	30
42	ash-Shura	6
43	az-Zukhruf	78
44	ad-Dukhan	44
45	al-Ghashiyya	30
46	al-Ahqaf	26
50	Qaf	-
68	al-Qalam	42

The above table shows the distribution of verses ending with the letter "Nun" in those Suras beginning with initial (symbolic) letters.

When a general examination of the rhyme scheme in the Qur'an is made, we see that around 80% of the rhymes consist of just three sounds (n, m, a) consisting of the letters Alif, Mim, Ya and Nun[258]. Excluding the letter "Nun," 30% of the verses are rhymed with "Mim," "Alif" or "Ya."

The four most frequently employed sounds in rhymes:

Letter	ا	ي	م	ن	Total
Sounds	a	a	m	n	
Verse number	949	246	666	3123	4984
Proportion (%)	15.22	3.94	10.68	50.08	79.92

The above table shows the proportional distribution of the four letters comprising 79.92% of the rhyme system in the Qur'an.

The following verses are just a few of the many examples of rhymes using these four letters.

Verse number	Surat al-Muminun
1	Qad aflaha almu/minoona
2	Allatheena hum fee salatihim khashiAAoona
3	Waallatheena hum AAani allaghwi muAAridoona
4	Waallatheena hum lilzzakati faAAiloona
5	Waallatheena hum lifuroojihim hafi*th*oona
6	... aw ma malakat aymanuhum fa-innahum ghayru maloomeena
7	... faola-ika humu alAAadoona
8	Waallatheena hum li-amanatihim waAAahdihim raAAoona
9	Waallatheena hum AAala salawatihim yuhafi*th*oona
10	Ola-ika humu alwarithoona
11	... hum feeha khalidoona
12	Walaqad khalaqna al-insana min sulalatin min teenin
13	Thumma jaAAalnahu nutfatan fee qararin makeenin
14	... fatabaraka Allahu ahsanu alkhaliqeena
15	Thumma innakum baAAda thalika lamayyitoona
16	Thumma innakum yawma alqiyamati tubAAathoona
17	... wama kunna AAani alkhalqi ghafileena

Verse number	Surat an-Nahl
1	... wataAAala AAamma yushrikoona
2	... annahu la ilaha illa ana faittaqooni
3	... taAAala AAamma yushrikoona
4	... fa-itha huwa khaseemun mubeenun
5	... wamanafiAAu waminha ta-kuloona
6	Walakum feeha jamalun heena tureehoona waheena tasrahoona

Verse number	Surat al-An'am
1	... thumma allatheena kafaroo birabbihim yaAAdiloona
2	... thumma antum tamtaroona
3	... wayaAAlamu ma taksiboona
4	... illa kanoo AAanha muAArideena
5	... fasawfa ya/teehim anbao ma kanoo bihi yastahzi-oona
6	... waansha/na min baAAdihim qarnan akhareena
7	... in hatha illa sihrun mubeenun
8	... thumma la yuntharoona
9	... walalabasna AAalayhim ma yalbisoona
10	... ma kanoo bihi yastahzi-oona

Verse number	Surat ar-Rum
6	... walakinna akthara alnnasi la yaAAlamoona
7	... wahum AAani al-akhirati hum ghafiloona
8	... wa-inna katheeran mina alnnasi biliqa-i rabbihim lakafiroona
9	... walakin kanoo anfusahum yathlimoona
10	... an kaththaboo bi-ayati Allahi wakanoo biha yastahzi-oona
11	... thumma ilayhi turjaAAoona
12	... yublisu almujrimoona
13	... wakanoo bishuraka-ihim kafireena
14	Wayawma taqoomu alssaAAatu yawma-ithin yatafarraqoona
15	... fahum fee rawdatin yuhbaroona

Verse number	Surah Yunus
26	... ola-ika as-habu aljannati hum feeha khalidoona
27	... ola-ika as-habu alnnari hum feeha khalidoona
28	... waqala shurakaohum ma kuntum iyyana taAAbudoona
29	... in kunna AAan AAibadatikum laghafileena
30	... wadalla AAanhum ma kanoo yaftaroona
31	... faqul afala tattaqoona
32	... faanna tusrafoona
33	... annahum la yu/minoona
34	... faanna tu/fakoona

Verse number	Surat al-'Ankabut
6	... inna Allaha laghaniyyun AAani alAAalameena
7	... walanajziyannahum ahsana allathee kanoo
	yaAAmaloona
8	... faonabbi-okum bima kuntum taAAmaloona
9	... lanudkhilannahum fee alssaliheena
10	... awa laysa Allahu bi-aAAlama bima fee sudoori
	alAAalameena
11	... walayaAAlamanna almunafiqeena
12	... innahum lakathiboona
13	... walayus-alunna yawma alqiyamati AAamma kanoo
	yaftaroona
14	... faakhathahumu alttoofanu wahum *tha*limoona

Verse number	Surat an-Naml
12	... innahum kanoo qawman fasiqeena
13	... hatha sihrun mubeenun
14	... faon*th*ur kayfa kana AAaqibatu almufsideena
15	... min AAibadihi almu/mineena
16	... inna hatha lahuwa alfadlu almubeenu
17	... fahum yoozaAAoona
18	... sulaymanu wajunooduhu wahum la yashAAuroona
19	... waadkhilnee birahmatika fee AAibadika alssaliheena

Verse number	Surat an-Nisa'
23	... inna Allaha kana ghafooran raheeman
24	... inna Allaha kana AAaleeman hakeeman
25	... waAllahu ghafoorun raheemun
26	... waAllahu AAaleemun hakeemun
27	... an tameeloo maylan AAatheeman

Verse number	Surat al-Ma'ida
22	... fa-in yakhrujoo minha fa-inna dakhiloona
23	... fatawakkaloo in kuntum mu/mineena
24	... inna hahuna qaAAidoona
25	... faofruq baynana wabayna alqawmi alfasiqeena
26	... fala ta/sa AAala alqawmi alfasiqeena
27	... qala innama yataqabbalu Allahu mina almuttaqeena
28	... innee akhafu Allaha rabba alAAalameena
29	... wathalika jazao al*ththa*limeena
30	... faqatalahu faasbaha mina alkhasireena
31	... faasbaha mina alnnadimeena

Verse number	Surat al-A'raf
2	... wathikra lilmu/mineena
3	... qaleelan ma tathakkaroona
4	... fajaaha ba/suna bayatan aw hum qa-iloona
5	... ith jaahum ba/suna illa an qaloo inna kunna *tha*limeena
6	... walanas-alanna almursaleena
7	... wama kunna gha-ibeena
8	... faola-ika humu almuflihoona
9	... bima kanoo bi-ayatina ya*th*limoona
10	... qaleelan ma tashkuroona
11	... lam yakun mina alssajideena

Verse number	Surat at-Tawba
7	.... inna Allaha yuhibbu almuttaqeena
8	... waaktharuhum fasiqoona
9	... innahum saa ma kanoo yaAAmaloona
10	... waola-ika humu almuAAtadoona
11	... wanufassilu al-ayati liqawmin yaAAlamoona
12	... laAAallahum yantahoona
13	... ahaqqu an takhshawhu in kuntum mu/mineena
14	... wayashfi sudoora qawmin mu/mineena

Verse number	Surat al-Baqara
62	... wala khawfun AAalayhim wala hum yahzanoona
63	... waothkuroo ma feehi laAAallakum tattaqoona
64	... lakuntum mina alkhasireena
65	... faqulna lahum koonoo qiradatan khasi-eena
66	... wamawAAithatan lilmuttaqeena
67	... aAAoothu biAllahi an akoona mina aljahileena
68	... faifAAaloo ma tu/maroona
69	... baqaratun safrao faqiAAun lawnuha tasurru alnnathireena

Verse numberı	Surah Al 'Imran
130	... waittaqoo Allaha laAAallakum tuflihoona
131	Waittaqoo alnnara allatee oAAiddat lilkafireena
132	... laAAallakum turhamoona
133	... oAAiddat lilmuttaqeena
134	... waAllahu yuhibbu almuhsineena
135	... walam yusirroo AAala ma faAAaloo wahum yaAAlamoona
136	... waniAAma ajru alAAamileena
137	... faonthuroo kayfa kana AAaqibatu almukaththibeena
138	... wamawAAithatun lilmuttaqeena
139	... waantumu al-aAAlawna in kuntum mu/mineena
140	... waAllahu la yuhibbu alththalimeena

Verse number	Surat al-Anbiya'
5	... falya/tina bi-ayatin kama orsila al-awwaloona
6	... afahum yu/minoona
7	... in kuntum la taAAlamoona
8	... wama kanoo khalideena
9	... waahlakna almusrifeena
10	... afala taAAqiloona
11	... waansha/na baAAdaha qawman akhareena
12	... hum minha yarkudoona

Verse number	Surat an-Nur
47	... wama ola-ika bialmu/mineena
48	... fareequn minhum muAAridoona
49	Wa-in yakun lahumu alhaqqu ya/too ilayhi muthAAineena
50	... bal ola-ika humu alththalimoona
51	... waola-ika humu almuflihoona
52	... faola-ika humu alfa-izoona
53	... inna Allaha khabeerun bima taAAmaloona
54	... wama AAala alrrasooli illa albalaghu almubeena
55	... faola-ika humu alfasiqoona

Verse number	Surat al-Hijr
5	... wama yasta/khiroona
6	... innaka lamajnoonun
7	... in kunta mina alssadiqeena
8	... wama kanoo ithan munthareena
9	... wa-inna lahu lahafithoona
10	Walaqad arsalna min qablika fee shiyaAAi al-awwaleena
11	... kanoo bihi yastahzi-oona
12	Kathalika naslukuhu fee quloobi almujrimeena
13	... waqad khalat sunnatu al-awwaleena
14	... feehi yaAArujoona
15	... nahnu qawmun mashooroona

The formation of rhymed prose with just two or three sounds in a poem of 200-300 lines may give that work an important quality, sufficient for it to be described as a masterpiece by literary critics today. However, bearing in mind the length of the Qur'an, the information it contains and its wise exposition, the extraordinary manner in which its rhymed prose system is used becomes even clearer and more beautiful. The Qur'an indeed contains an ocean of information relating to a wide variety of subjects. They include: religious and moral guidance, lessons from the lives of the peoples of the past, the message of the prophets and messengers of Allah, the physical sciences and historical accounts of important events. But all of this, although wonderful in itself, is delivered with the most fantastic literary rhythm and excellence. It is simply not possible for so much rhymed prose by use of so few sounds in the Qur'an, with its varied and knowledgeable subject matter, to be achieved by human endeavour. From that point of view, it is not surprising that Arab linguists describe the Qur'an as "very definitely inimitable."



COMMENTS ABOUT THE QUR'AN FROM VARIOUS SCHOLARS

Some Comments on the Literary Excellence and Inimitability of the Qur'an

... the Meccans still demanded of him a miracle, and with remarkable boldness and self confidence Mohammad appealed as a supreme confirmation of his mission to the Koran itself. Like all Arabs they were the connoisseurs of language and rhetoric. Well, then if the Koran were his own composition other men could rival it. Let them produce ten verses like it. If they could not (and it is obvious that they could not), then let them accept the Koran as an outstanding evident miracle.[259] (The well-known Arabist Hamilton Gibb of the University of Oxford)

As a literary monument the Koran thus stands by itself, a production unique to the Arabic literature, having neither forerunners nor successors in its own idiom. Muslims of all ages are united in proclaiming the inimitability not only of its contents but also of its style.[260] (Well-known Arabist Hamilton Gibb)

The influence of the Koran on the development of Arabic Literature has been incalculable, and exerted in many directions. Its ideas, its language, its rhymes pervade all subsequent literary works in greater or less measure. Its specific linguistic features were not emulated, either in the chancery prose of the next century or in the later prose writings, but it was at least partly due to the flexibility imparted by the Koran to the High Arabic idiom that the former could be so rapidly developed and adjusted to the new needs of the imperial government and an expanding society.[261] (Well-known Arabist Hamilton Gibb)

Whenever [Prophet] Muhammad [saas] was asked a miracle, as a proof of the authenticity of his mission, he quoted the composition of the Qur'an and its incomparable excellence as proof of its divine origin. And, in fact, even for those who are non-Muslims nothing is more marvellous than its language with such apprehensible plenitude and a grasping sonority… The ampleness of its syllables with a grandiose cadence and with a remarkable rhythm have been of much moment in the conversion of the most hostile and the most sceptic.[262] (From Paul Casanova's article, "*L'Enseignement de I'Arabe au College de France*" [The Arab Teaching at the College of France])

It [the Qur'an] is a literal revelation of Allah, dictated to [Prophet] Muhammad [saas] by Gabriel, perfect in every letter. It is an ever-present miracle witnessing to itself and to [Prophet] Muhammad [saas], the Prophet of Allah. Its miraculous quality resides partly in its style, so perfect and lofty that neither men nor *Jinn* could produce a single chapter to compare with its briefest chapter, and partly in its content of teachings, prophecies about the future, and amazingly accurate information such as [Prophet] Muhammad [saas] could never have gathered of his own accord.[263] (From Harry Gaylord Dorman's book, *Towards Understanding Islam*)

All those who are acquainted with the Qur'an in Arabic agree in praising the beauty of this religious book; its grandeur of form is so sublime that no translation into any European language can allow us to appreciate it.[264](From Edward Montet's *Traduction Francaise du Coran* [French Translation of the Qur'an])

The Qur'an in its original Arabic dress has a ... beauty and charm of its own. Couched in concise and exalted style, its brief pregnant sentences, often rhymed, possess an expressive force and explosive energy which it is extremely difficult to convey by literal word for word translation.[265] (From John Naish's book, *The Wisdom of the Qur'an*)

The Koran is universally allowed to be written with the utmost elegance and purity of language, in the dialect of Koreish, the most noble and polite of all Arabians… The style of the Koran is generally beautiful and fluent,… and in many places, specifically where the majesty and attributes of God are described, sublime and magnificent… He succeeded so well, and so strangely captivated the minds of his audience, that several of his opponents thought it the effect of witchcraft and enchantment.[266] (From George Sale's book, *The Koran: The Preliminary Discourse*)

A miracle of purity of style of wisdom and of truth.[267] (From Rev. R. Bosworth Smith's book, Mohammed and Mohammadanism)

It [the Qur'an] has a rhythm of peculiar beauty and a cadence that charms the ear. Many Christian Arabs speak of its style with warm admiration, and most Arabists acknowledge its excellence… indeed it may be affirmed that within the literature of the Arabs, wide and fecund as it is both in poetry and in elevated prose, there is nothing to compare with it.[268] (From Alfred Guillaume's book, *Islam*)

Some Comments on the Divine Nature of the Qur'an and Its Effect on People

On the whole we find in it a collection of wisdom which can be adopted by the most intelligent of men, the greatest of philosophers and the most skilful of politicians… But there is another proof of the Divinity of the Qur'an; it is the fact that it has been preserved intact through the ages since the time of its Revelation till the present day… Read and reread by the Muslim world, this book does not rouse in the faithful any weariness, it rather, through repetition, is more loved every day. It gives rise to a profound feeling of awe and respect in the one who reads it or listens to it… Therefore, above all, what caused the great and rapid diffusion of Islam was through the fact that this Book… was the book of Allah…[269] (From Laura Veccia Vaglieri's book, *Apologie de I'Islamisme*)

The Koran abounds in excellent moral suggestions and precepts, its composition is so fragmentary that we cannot turn to a single page without finding maxims of which all men must approve. This fragmentary construction yields texts, and mottoes, and rules com-

plete in themselves, suitable for common men in any of the incidents of life.[270] (From John William Draper's book, *A History of the Intellectual Development of Europe*)

It must be acknowledged, too, that the Koran deserves the highest praise for its conceptions of the Divine nature in reference to the attributes of Power, knowledge and universal Providence and Unity-that its belief and trust in the one Allah of Heaven and Earth is deep and fervent-and that… it embodies much of the noble and deep moral earnestness, and sententious oracular wisdom, and has proved that there are elements in it on which mighty nations and conquering… Empires can be built up.[271] (From the preface of *The Koran*, translated from the Arabic by Rev. J. M. Rodwell)

Here, therefore, its merits as a literary production should perhaps not be measured by some preconceived maxims of subjective and aesthetic taste, but by the effects which it produced in [Prophet] Muhammad's [saas] contemporaries and fellow countrymen. If it spoke so powerfully and convincingly to the hearts of his hearers as to weld hitherto centrifugal and antagonistic elements into one compact and well-organized body, animated by ideas far beyond those which had until now ruled the Arabian mind, then its eloquence was perfect, simply because it created a civilized nation out of savage tribes…[272] (A statement of Dr. Steingass, quoted in T. P. Hughes' *Dictionary of Islam*)

In making the present attempt… to produce something which might be accepted as echoing however faintly the sublime rhetoric of the Arabic Koran, I have been at pains to study the intricate and richly varied rhythms which-apart from the message itself-constitute the Koran's undeniable claim to rank amongst the greatest literary masterpieces of mankind… This very characteristic feature... has been almost totally ignored by previous translators; it is therefore not surprising that what they have wrought sounds dull and flat indeed in comparison with the splendidly decorated original.[273]

(From Arthur J. Arberry's book, *The Koran Interpreted*)

A totally objective examination of it [the Qur'an] in the light of the modern knowledge, leads us to recognize the agreement between the two, as has been already noted on repeated occasions. It makes us deem it quite unthinkable for a man of [Prophet] Muhammad's [saas] time to have been the author of such statements on account of the state of knowledge in his day. Such considerations are part of what gives the Qur'anic Revelation its unique place, and forces the impartial scientist to admit his inability to provide an explanation which calls solely upon materialistic reasoning.[274] (Dr. Maurice Bucaille, former chief of the Surgical Clinic, University of Paris)

… [T]he Qur'an has invariably kept its place as the fundamental starting point… A creed so precise, … so accessible to the ordinary understanding might be expected to possess and does indeed possess a marvellous power of winning its way into the consciences of men.[275] (Edward Montet, a French intellectual)

... We have a book absolutely unique in its origin, in its preservation… on the Substantial authority of which no one has ever been able to cast a serious doubt.[276] (From Rev. Bosworth Smith's book, *Muhammad and Muhammadanism*)

… the Qur'an is explicit in the support of the freedom of conscience.[277] (From James Michener's article, "Islam: The Misunderstood Religion")

Sense of justice is one of the most wonderful ideals of Islam, because as I read in the Qur'an I find those dynamic principles of life, not mystic but practical ethics for the daily conduct of life suited to the whole world.[278] (From a lecture on "The Ideals of Islam" quoted in the book *Speeches and Writings of Sarojini Naidu*)

We must not be surprised to find the Qur'an the fountainhead of the sciences. Every subject connected with heaven or earth, human life, commerce and various trades are occasionally touched upon, and this gave rise to the production of numerous mono-

graphs forming commentaries on parts of the holy book. In this way the Qur'an was responsible for great discussions, and to it was indirectly due to the marvellous development of all branches of science in the Muslim world… This again not only affected the Arabs but also induced Jewish philosophers to treat metaphysical and religious questions after Arab methods. Finally, the way in which Christian scholasticism was fertilised by Arabian theosophy need not be further discussed.

Spiritual activity once aroused within Islamic bounds was not confined to theological speculations alone. Acquaintance with the philosophical, mathematical, astronomical and medical writings of the Greeks led to the pursuance of these studies. In the descriptive revelations [Prophet] Muhammad [saas] repeatedly calls attention to the movement of the heavenly bodies, as parts of the miracles of Allah forced into the service of man and therefore not to be worshipped. How successfully Moslem people of all races pursued the study of astronomy is shown by the fact that for centuries they were its principal supporters. Even now many Arabic names of stars and technical terms are in use. Medieval astronomers in Europe were pupils of the Arabs.

In the same manner the Qur'an gave an impetus to medical studies and recommended the contemplation and study of Nature in gen-



eral.[279] (From Prof. Hartwig Hirschfeld's book, *New Researches into the Composition and Exegesis of the Qur'an*)

The Koran admittedly occupies an important position among the great religious books of the world. Though the youngest of the epoch-making works belonging to this class of literature, it yields to hardly any in the wonderful effect which it has produced on large masses of men. It has created an all but new phase of human thought and a fresh type of character. It first transformed a number of heterogeneous desert tribes of the Arabian peninsula into a nation of heroes, and then proceeded to create the vast politico-religious organizations of the Muhammadan world which are one of the great forces with which Europe and the East have to reckon today.[280] (From G. Margoliouth's introduction to *The Koran*, translated from the Arabic by Rev. J. M. Rodwell)

However often we turn to it [the Qur'an]…, it soon attracts, astounds, and in the end enforces our reverence… Its style, in accordance with its contents and aim is... ever and anon truly sublime-Thus this book will go on exercising through all ages a most potent influence.[281] (A saying of Goethe quoted in T. P. Hughes' book, *Dictionary of Islam*)



Some Scientiss' Comments Regarding The Qur'an

... There are too many accuracies [in the Qur'an] and, like Dr. Moore, I have no difficulty in my mind that this is a divine inspiration or revelation which led him to these statements.[282] (Dr. T. V. N. Persaud, Professor of Anatomy, Pediatrics and Child Health, Obstetrics, Gynecology, Reproductive Sciences at the University of Manitoba)

... It follows, I think, that not only there is no conflict between genetics and religion but, in fact, religion can guide science by adding revelation to some of the traditional scientific approaches, that there exist statements in the Quran shown centuries later to be valid, which support knowledge in the Quran having been derived from God.[283] (Dr. Joe Leigh Simpson, Professor of Obstetrics and Gynecology, Molecular and Human Genetics)

As a scientist, I can only deal with things which I can specifically see. I can understand embryology and developmental biology. I can understand the words that are translated to me from the Quran. As I gave the example before, if I were to transpose myself into that era, knowing what I knew today and describing things, I could not describe the things which were described... So I see nothing here in conflict with the concept that divine intervention was involved in what he [Prophet Muhammad (saas)] was able to write.[284] (Dr. E. Marshall Johnson, Professor Emeritus of Anatomy and Developmental Biology at Thomas Jefferson University)

In a relatively few *aayahs* [Quranic verses] is contained a rather comprehensive description of human development from the time of commingling of the gametes through organogenesis. No such distinct and complete record of human development, such as classification, terminology, and description, existed previously. In most, if not all, instances, this description antedates by many centuries the recording of the various stages of human embryonic and fetal development recorded in the traditional scientific literature.[285] (Gerald C. Go-

eringer, Associate Professor of Medical Embryology at Georgetown University)

It has been a great pleasure for me to help clarify statements in the Qur'an about human development. It is clear to me that these statements must have come to [Prophet] Muhammad [saas] from God, or Allah, because most of this knowledge was not discovered until many centuries later. This proves to me that [Prophet] Muhammad [saas] must have been a messenger of God, or Allah.[286] (Dr. Keith L. Moore, Professor Emeritus, Department of Anatomy and Cell Biology, University of Toronto. Distinguished embryologist and the author of several medical textbooks)

... Because the staging of human embryos is complex, owing to the continuous process of change during development, it is proposed that a new system of classification could be developed using the terms mentioned in the Qur'an and Sunnah. The proposed system is simple, comprehensive, and conforms with present embryological knowledge.[287] (Dr. Keith L. Moore, Professor Emeritus, Department of Anatomy and Cell Biology, University of Toronto)

The intensive studies of the Qur'an and Hadith in the last four years have revealed a system of classifying human embryos that is amazing since it was recorded in the seventh century A.D... the descriptions in the Qur'an cannot be based on scientific knowledge in the seventh century...[288] (Dr. Keith L. Moore, Professor Emeritus, Department of Anatomy and Cell Biology, University of Toronto)

I think it is almost impossible that he [Prophet Muhammad (saas)] could have known about things like the common origin of the universe, because scientists have only found out within the last few years with very complicated and advanced technological methods that this is the case… Somebody who did not know something about nuclear physics 1400 years ago could not, I think, be in a position to find out from his own mind for instance that the earth and the heav-

ens had the same origin, or many others of the questions that we have discussed here.[289] (Alfred Kroner, Professor of the Department of Geosciences, University of Mainz, Germany. One of the world's most famous geologists)

- If you combine all these and you combine all these statements that are being made in the Qur'an in terms that relate to the earth and the formation of the earth and science in general, you can basically say that statements made there in many ways are true, they can now be confirmed by scientific methods... And that many of the statements made in there at that time could not be proven, but that modern scientific methods are now in a position to prove what [Prophet] Muhammad [saas] said 1400 years ago.[290] (Alfred Kroner, Professor of the Department of Geosciences, University of Mainz, Germany)

- I say, I am very much impressed by finding true astronomical facts in Qur'an, and for us modern astronomers have been studying very small piece of the universe. We have concentrated our efforts for understanding of very small part. Because by using telescopes, we can see only very few parts of the sky without thinking about the whole universe. So by reading Qur'an and by answering to the questions, I think I can find my future way for investigation of the universe.[291] (Professor Yushidi Kusan, Director of the Tokyo Observatory, Tokyo, Japan)

- Certainly, I would like to leave it at that, that what we have seen is remarkable, it may or may not admit of scientific explanation, there may well have to be something beyond what we understand as ordinary human experience to account for the writings that we have seen.[292] (Professor Armstrong, Professor of Astronomy serving with NASA)

- It is difficult to imagine that this type of knowledge was existing at that time, around 1400 years back. May be some of the things they have simple idea about, but to describe those things

in great detail is very difficult. So this is definitely not simple human knowledge. A normal human being cannot explain this phenomenon in that much detail. So, I thought the information must have come from a supernatural source.[293] (Prof. Dorja Rao, Professor of Marine Geology at King Abdulaziz University, Jeddah, Saudi Arabia)

… I believe that everything mentioned in the Qur'an 1400 years ago is true and can be proven by scientific methods… This must be by inspiration from God, or Allah, Who knows all science. Thus, I believe that this is the time to say: "There is no god but Allah and Muhammad is the Messenger of Allah."[294] (Prof. Tejatat Tejasen, Head of the Department of Anatomy and Embryology, University of Chiang Mai, Chiang Mai, Thailand)

The Qur'an came several centuries ago, confirming what we discovered. This indicates that the Qur'an is the word of God.[295] (Prof. Joly Sumson, Professor in Gynecology and Obstetrics)

It [the Qur'an] discusses the past, the recent period, and the future. I do not know the cultural level of the people in the period of [Prophet] Muhammad [saas] and I do not know their scientific level. If it is as we know about the low scientific level in this ancient period, and the absence of technology, then there is no doubt that what we are reading nowadays in the Qur'an is a light from God. He inspired it in [Prophet] Muhammad [saas]. I had made research into the early history of civilization in the Middle East in order to know if there was such perfect information as this. If there was no other information like the Qur'anic information in that ancient period, this strengthens the faith that God sent [Prophet] Muhammad [Prophet]; He sent to him a little amount from His large science, which we have discovered only in recent time. We are hoping for continuous dialogue in the subject of science with the Qur'an in the field of geology.[296] (Prof. Palmar, one of the major scientists in geology in the USA)

After a discussion about the function of mountains for the fixing of the earth:

I believe that this [the Qur'an's information] is very very strange, it is nearly impossible, I believe truly that if what you are saying is right, thus, this book [the Qur'an] is very valuable to be noticed, I agree with you.[297] (Professor Syawda, a Japanese scientist famous in Japan and internationally in the field of oceanic geology.)

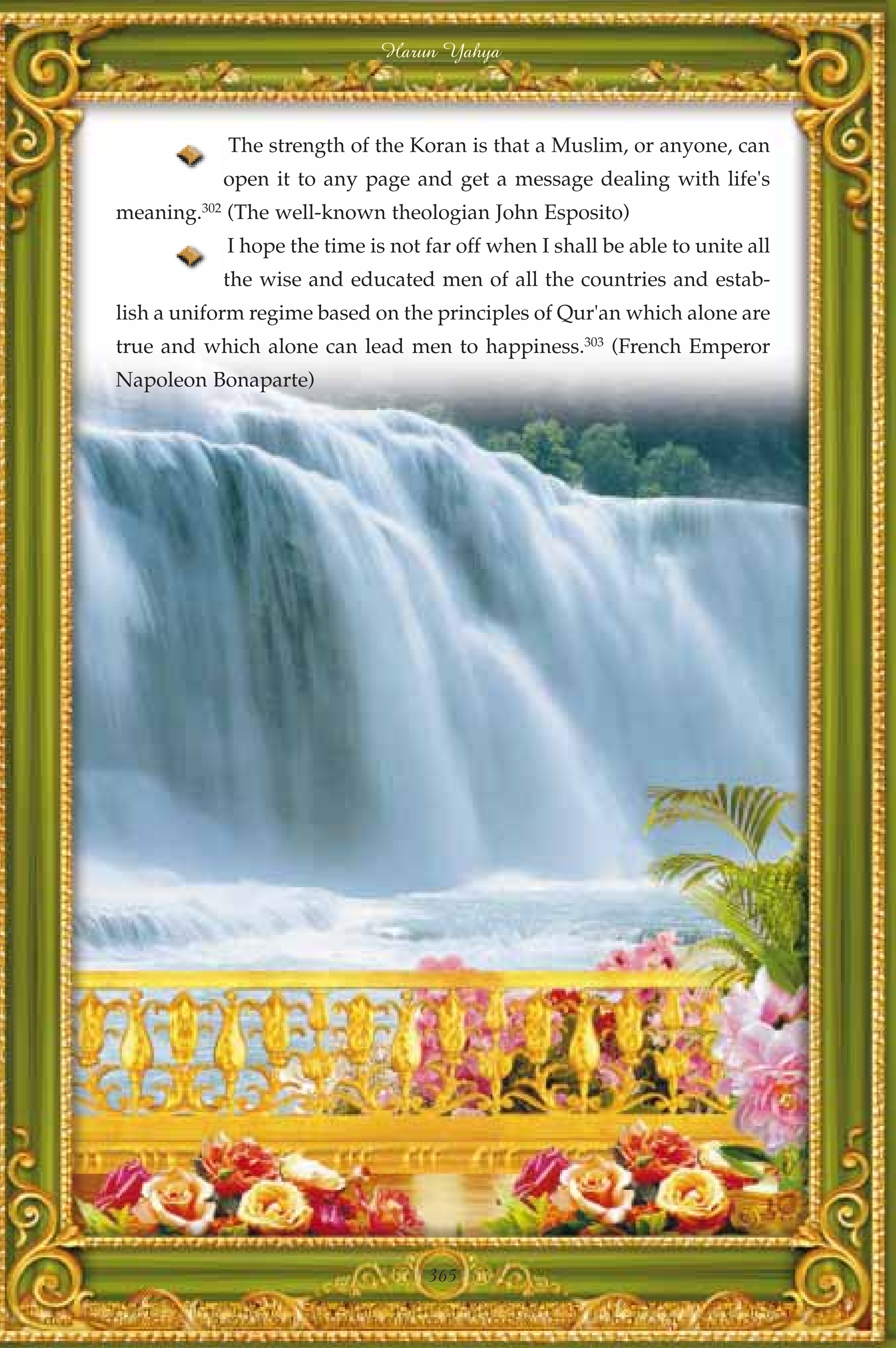
A Selection of Other Statements Regarding the Qur'an

Everything made so much sense. This is the beauty of the Qur'an; it asks you to reflect and reason... When I read the Qur'an further, it talked about prayer, kindness and charity. I was not a Muslim yet, but I felt the only answer for me was the Qur'an and Allah had sent it to me.[298] (Yusuf Islam [Cat Stevens], former British pop star)

I am not a Muslim in the usual sense, though I hope I am a "Muslim" as "one surrendered to God," but I believe that embedded in the Quran and other expressions of the Islamic vision are vast stores of divine truth from which I and other occidentals have still much to learn, and "Islam is certainly a strong contender for the supplying of the basic framework of the one religion of the future."[299] (From the book *Islam and Christianity Today*)

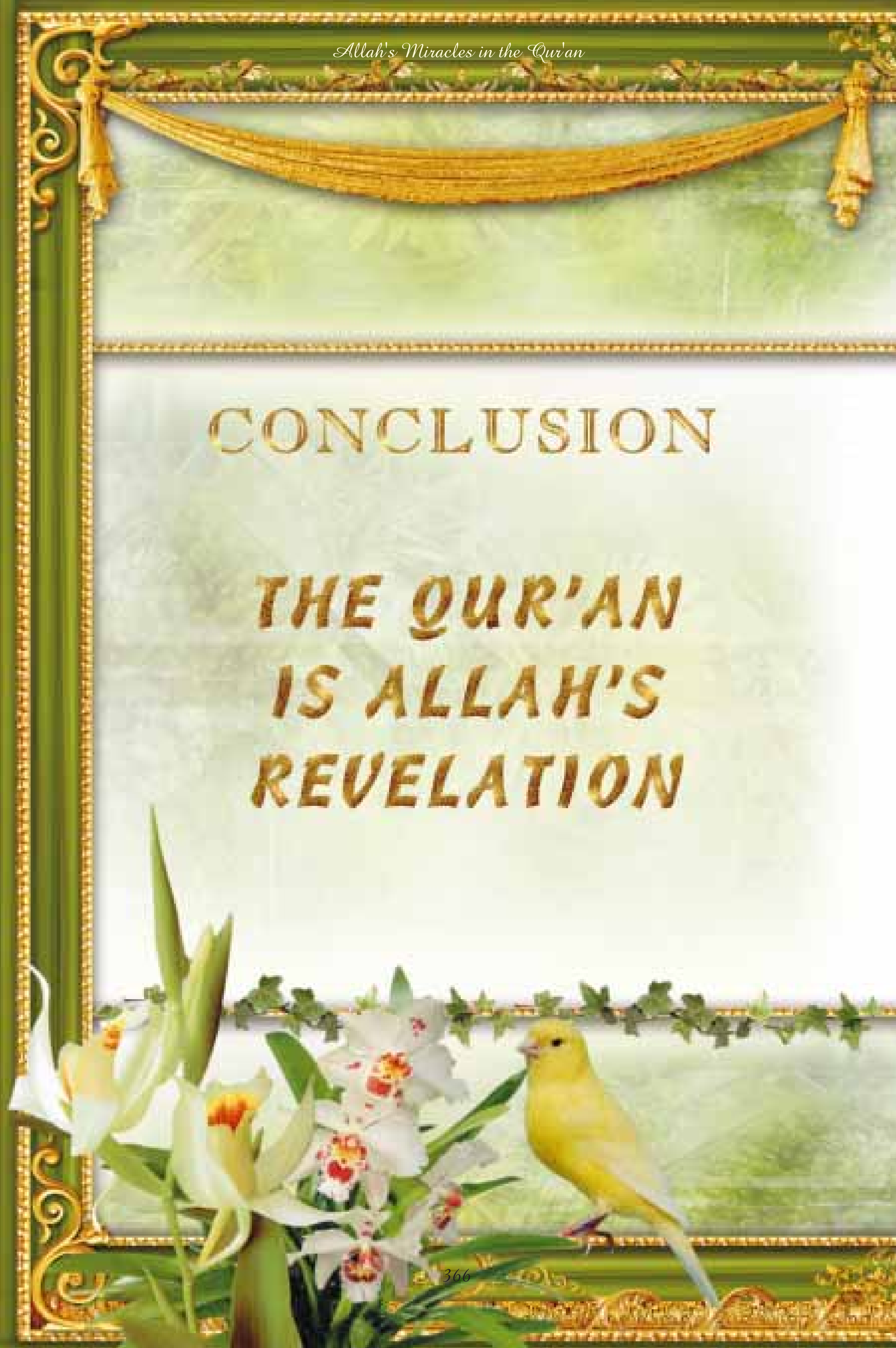
The essential and definite element of my conversion to Islam was the Qur'an. I began to study it before my conversion with the critical spirit of a Western intellectual... There are certain verses of this book, the Qur'an, revealed more than thirteen centuries ago, which teach exactly the same notions as the most modern scientific researches do. This definitely converted me.[300] (Ali Selman Benoist, France, Doctor of Medicine)

I have read the Sacred Scriptures of every religion; nowhere have I found what I encountered in Islam: perfection. The Holy Qur'an, compared to any other scripture I have read, is like the Sun compared to that of a match. I firmly believe that anybody who reads the Word of Allah with a mind that is not completely closed to Truth, will become a Muslim.[301] (Saifuddin Dirk Walter Mosig)



- The strength of the Koran is that a Muslim, or anyone, can open it to any page and get a message dealing with life's meaning.[302] (The well-known theologian John Esposito)

- I hope the time is not far off when I shall be able to unite all the wise and educated men of all the countries and establish a uniform regime based on the principles of Qur'an which alone are true and which alone can lead men to happiness.[303] (French Emperor Napoleon Bonaparte)



CONCLUSION

THE QUR'AN IS ALLAH'S REVELATION



All that we have seen in this work shows us one clear fact: The Qur'an, this extraordinary book which was revealed to the Seal of the Prophets, Muhammad (saas), is a source of inspiration and true knowledge. The book of Islam-no matter what subject it refers to-is being proved as Allah's word as each new piece of historical, scientific or archaeological information comes to light. Facts about scientific subjects and the news delivered to us about the past and future, facts that no one could have known at the time of the Qur'an's revelation, are announced in its verses. It is impossible for this information, examples of which we have discussed in detail in this book, to have been known with the level of knowledge and technology available in 7th century Arabia. With this in mind, let us ask:

Could anyone in 7th century Arabia have known that our atmosphere is made up of seven layers?





Could anyone in 7th century Arabia have known in detail the various stages of development from which an embryo grows into a baby and then enters the world from inside his mother?

Could anyone in 7th century Arabia have known that the universe is "steadily expanding," as the Qur'an puts it, when modern scientists have only in recent decades put forward the idea of the "Big Bang"?

Could anyone in 7th century Arabia have known about the fact that each individual's fingertips are absolutely unique, when we have only discovered this fact recently, using modern technology and modern scientific equipment?

Could anyone in 7th century Arabia have known about the role of one of Pharaoh's most prominent aids, Haman, when the details of hieroglyphic translation were only discovered two centuries ago?

Could anyone in 7th century Arabia have known that the word "Pharaoh" was only used from the 14th century B.C. and not before, as the Old Testament erroneously claims?

Could anyone in 7th century Arabia

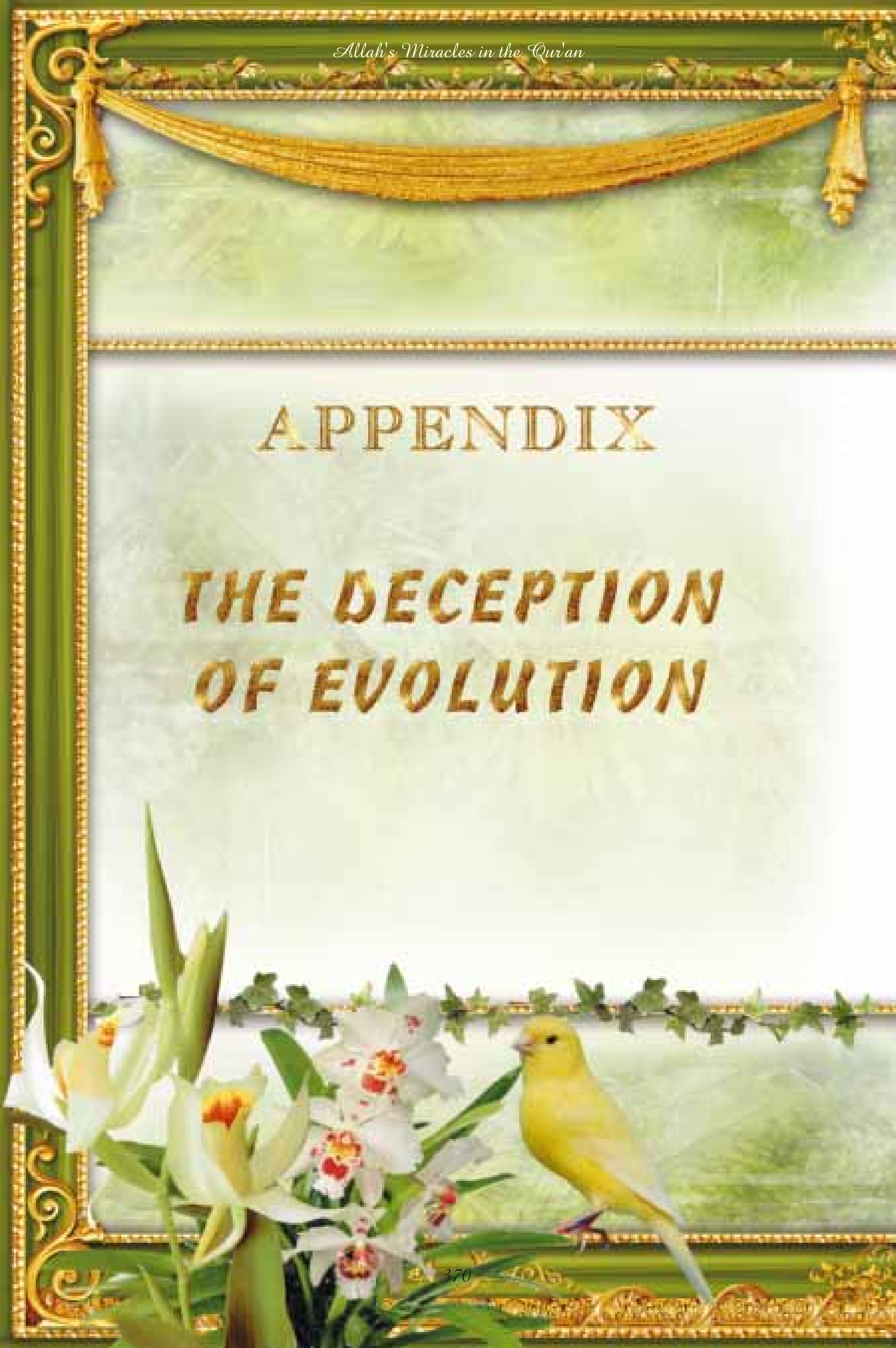
have known about Ubar and Iram's Pillars, which were only discovered in recent decades via the use of NASA satellite photographs?

The only answer to these questions is as follows: the Qur'an is the word of the Almighty Allah, the Originator of everything and the One Who encompasses everything with His knowledge. In one verse, Allah says, "**If it had been from other than Allah, they would have found many inconsistencies in it.**" (Qur'an, 4:82) Every piece of information the Qur'an contains reveals the secret miracles of this divine book.

The human being is meant to hold fast to this Divine Book revealed by Allah and to receive it with an open heart as his one and only guide in life. In the Qur'an, Allah tells us the following:

> **This Qur'an could never have been devised by any besides Allah. Rather it is confirmation of what came before it and an elucidation of the Book which contains no doubt from the Lord of all the worlds. Do they say, "He has invented it"? Say: "Then produce a sura like it and call on anyone you can besides Allah if you are telling the truth." (Qur'an, 10:37-38)**
>
> **And this is a Book We have sent down and blessed, so follow it and have fear of Allah so that hopefully you will gain mercy. (Qur'an, 6:155)**





APPENDIX

THE DECEPTION OF EVOLUTION

Darwinism, in other words the theory of evolution, was put forward with the aim of denying the fact of creation, but is in truth nothing but failed, unscientific nonsense. This theory, which claims that life emerged by chance from inanimate matter, was invalidated by the scientific evidence of clear "design" in the universe and in living things. In this way, science confirmed the fact that Allah created the universe and the living things in it. The propaganda carried out today in order to keep the theory of evolution alive is based solely on the distortion of the scientific facts, biased interpretation, and lies and falsehoods disguised as science.

Yet this propaganda cannot conceal the truth. The fact that the theory of evolution is the greatest deception in the history of science has been expressed more and more in the scientific world over the last 20-30 years. Research carried out after the 1980s in particular has revealed that the claims of Darwinism are totally unfounded, something that has been stated by a large number of scientists. In the United States in par-



ticular, many scientists from such different fields as biology, biochemistry and palaeontology recognize the invalidity of Darwinism and employ the concept of intelligent design to account for the origin of life. This "intelligent design" is a scientific expression of the fact that Allah created all living things.

We have examined the collapse of the theory of evolution and the proofs of creation in great scientific detail in many of our works, and are still continuing to do so. Given the enormous importance of this subject, it will be of great benefit to summarize it here.

The Scientific Collapse of Darwinism

Although this doctrine goes back as far as ancient Greece, the theory of evolution was advanced extensively in the nineteenth century. The most important development that made it the top topic of the world of science was Charles Darwin's *The Origin of Species*, published in 1859. In this book, he denied that Allah created different living species on Earth separately, for he claimed that all living beings had a common ancestor and had diversified over time through small changes. Darwin's theory was not based on any concrete scientific finding; as he also accepted, it was just an "assumption." Moreover, as Darwin confessed in the long chapter of his book titled "Difficulties on Theory," the theory failed in the face of many critical questions.

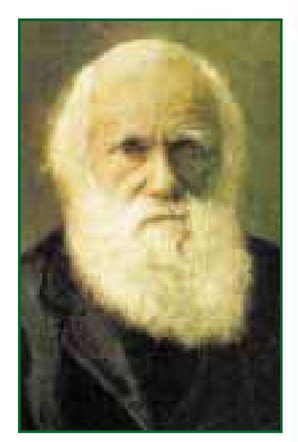
Darwin invested all of his hopes in new scientific discoveries, which he expected to solve these difficulties. However, contrary to his expectations, scientific findings expanded the dimensions of these difficulties. The defeat of Darwinism in the face of science can be reviewed under three basic topics:

1) The theory cannot explain how life originated on Earth.

2) No scientific finding shows that the "evolutionary mechanisms" proposed by the theory have any evolutionary power at all.

3) The fossil record proves the exact opposite of what the theory suggests.

In this section, we will examine these three basic points in general outlines:


Charles Darwin

The First Insurmountable Step: The Origin of Life

The theory of evolution posits that all living species evolved from a single living cell that emerged on the primitive Earth 3.8 billion years ago. How a single cell could generate millions of complex living species and, if such an evolution really occurred, why traces of it cannot be observed in the fossil record are some of the questions that the theory cannot answer. However, first and foremost, we need to ask: How did this "first cell" originate?

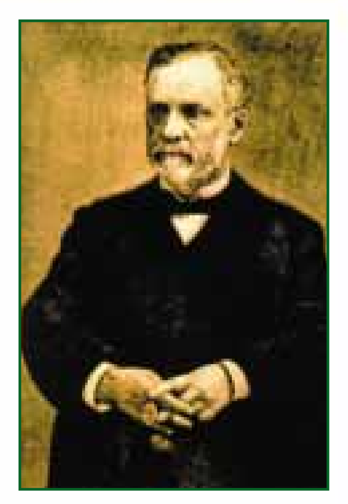
Since the theory of evolution denies creation and any kind of supernatural intervention, it maintains that the "first cell" originated coincidentally within the laws of nature, without any design, plan or arrangement. According to the theory, inanimate matter must have produced a living cell as a result of coincidences. Such a claim, however, is inconsistent with the most unassailable rules of biology.

"Life Comes from Life"

In his book, Darwin never referred to the origin of life. The primitive understanding of science in his time rested on the assumption that living beings had a very simple structure. Since medieval times, spontaneous generation, which asserts that non-living materials came together to form living organisms, had been widely accepted. It was commonly believed that insects came into being from food leftovers, and mice from wheat. Interesting experiments were conducted to prove this theory. Some wheat was placed on a dirty piece of cloth, and it was believed that mice would originate from it after a while.

Similarly, maggots developing in rotting meat was assumed to be

evidence of spontaneous generation. However, it was later understood that worms did not appear on meat spontaneously, but were carried there by flies in the form of larvae, invisible to the naked eye.


Louis Pasteur

Even when Darwin wrote *The Origin of Species*, the belief that bacteria could come into existence from non-living matter was widely accepted in the world of science.

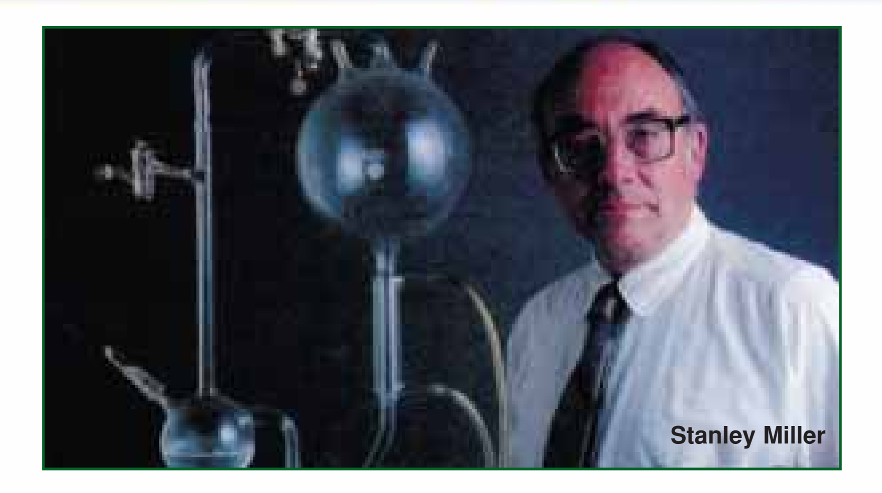
However, five years after the publication of Darwin's book, Louis Pasteur announced his results after long studies and experiments, that disproved spontaneous generation, a cornerstone of Darwin's theory. In his triumphal lecture at the Sorbonne in 1864, Pasteur said: "Never will the doctrine of spontaneous generation recover from the mortal blow struck by this simple experiment."[304]

For a long time, advocates of the theory of evolution resisted these findings. However, as the development of science unraveled the complex structure of the cell of a living being, the idea that life could come into being coincidentally faced an even greater impasse.

Inconclusive Efforts in the Twentieth Century

The first evolutionist who took up the subject of the origin of life in the twentieth century was the renowned Russian biologist Alexander Oparin. With various theses he advanced in the 1930s, he tried to prove that a living cell could originate by coincidence. These studies, however, were doomed to failure, and Oparin had to make the following confession:


Alexander Oparin


Stanley Miller

> Unfortunately, however, the problem of the origin of the cell is perhaps the most obscure point in the whole study of the evolution of organisms.[305]

Evolutionist followers of Oparin tried to carry out experiments to solve this problem. The best known experiment was carried out by the American chemist Stanley Miller in 1953. Combining the gases he alleged to have existed in the primordial Earth's atmosphere in an experiment set-up, and adding energy to the mixture, Miller synthesized several organic molecules (amino acids) present in the structure of proteins.

Barely a few years had passed before it was revealed that this experiment, which was then presented as an important step in the name of evolution, was invalid, for the atmosphere used in the experiment was verydifferent from the real Earth conditions.[306]

After a long silence, Miller confessed that the atmosphere medium he used was unrealistic.[307]

All the evolutionists' efforts throughout the twentieth century to explain the origin of life ended in failure. The geochemist Jeffrey Bada, from the San Diego Scripps Institute accepts this fact in an article published in *Earth* magazine in 1998:

> Today as we leave the twentieth century, we still face the biggest unsolved problem that we had when we entered the twentieth century: How did life originate on Earth?[308]

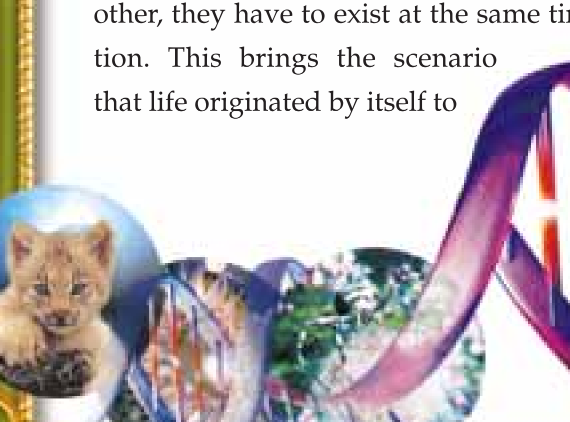
The Complex Structure of Life

The primary reason why the theory of evolution ended up in such a great impasse regarding the origin of life is that even those living organisms deemed to be the simplest have incredibly complex structures. The cell of a living thing is more complex than all of our man-made technological products. Today, even in the most developed laboratories of the world, a living cell cannot be produced by bringing organic chemicals together.

The conditions required for the formation of a cell are too great in quantity to be explained away by coincidences. The probability of proteins, the building blocks of a cell, being synthesized coincidentally, is 1 in 10^{950} for an average protein made up of 500 amino acids. In mathematics, a probability smaller than 1 over 10^{50} is considered to be impossible in practical terms.

The DNA molecule, which is located in the nucleus of a cell and which stores genetic information, is an incredible databank. If the information coded in DNA were written down, it would make a giant library consisting of an estimated 900 volumes of encyclopaedias consisting of 500 pages each.

A very interesting dilemma emerges at this point: DNA can replicate itself only with the help of some specialized proteins (enzymes). However, the synthesis of these enzymes can be realized only by the information coded in DNA. As they both depend on each other, they have to exist at the same time for replication. This brings the scenario that life originated by itself to





a deadlock. Prof. Leslie Orgel, an evolutionist of repute from the University of San Diego, California, confesses this fact in the September 1994 issue of the *Scientific American* magazine:

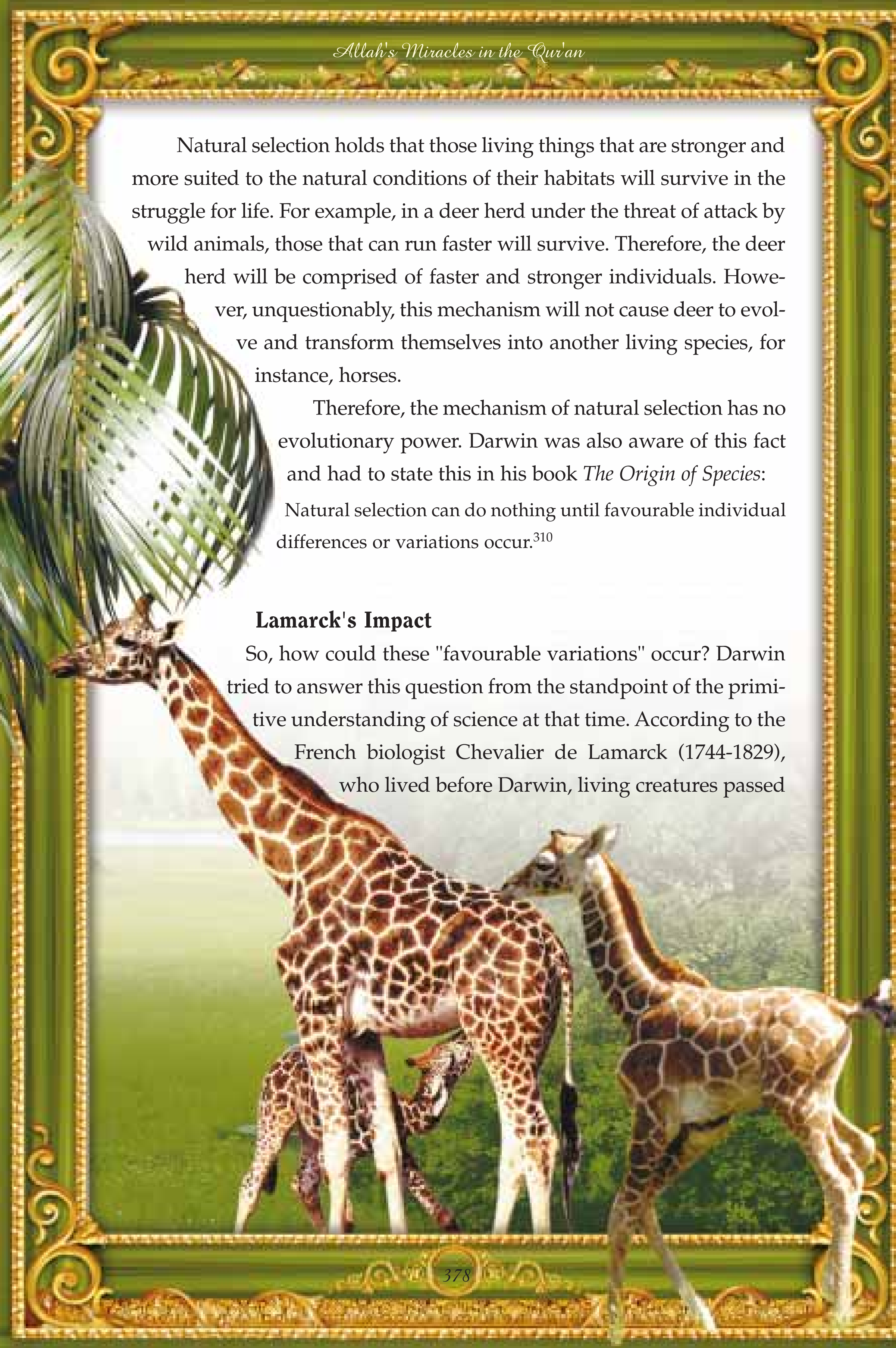
> It is extremely improbable that proteins and nucleic acids, both of which are structurally complex, arose spontaneously in the same place at the same time. Yet it also seems impossible to have one without the other. And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means.[309]

No doubt, if it is impossible for life to have originated from natural causes, then it has to be accepted that life was "created" in a supernatural way. This fact explicitly invalidates the theory of evolution, whose main purpose is to deny creation.

Imaginary Mechanism of Evolution

The second important point that negates Darwin's theory is that both concepts put forward by the theory as "evolutionary mechanisms" were understood to have, in reality, no evolutionary power.

Darwin based his evolution allegation entirely on the mechanism of "natural selection." The importance he placed on this mechanism was evident in the name of his book: *The Origin of Species, By Means of Natural Selection…*



Natural selection holds that those living things that are stronger and more suited to the natural conditions of their habitats will survive in the struggle for life. For example, in a deer herd under the threat of attack by wild animals, those that can run faster will survive. Therefore, the deer herd will be comprised of faster and stronger individuals. However, unquestionably, this mechanism will not cause deer to evolve and transform themselves into another living species, for instance, horses.

Therefore, the mechanism of natural selection has no evolutionary power. Darwin was also aware of this fact and had to state this in his book *The Origin of Species*:

> Natural selection can do nothing until favourable individual differences or variations occur.[310]

Lamarck's Impact

So, how could these "favourable variations" occur? Darwin tried to answer this question from the standpoint of the primitive understanding of science at that time. According to the French biologist Chevalier de Lamarck (1744-1829), who lived before Darwin, living creatures passed

on the traits they acquired during their lifetime to the next generation. He asserted that these traits, which accumulated from one generation to another, caused new species to be formed. For instance, he claimed that giraffes evolved from antelopes; as they struggled to eat the leaves of high trees, their necks were extended from generation to generation.

Darwin also gave similar examples. In his book *The Origin of Species*, for instance, he said that some bears going into water to find food transformed themselves into whales over time.[311]

However, the laws of inheritance discovered by Gregor Mendel (1822-84) and verified by the science of genetics, which flourished in the twentieth century, utterly demolished the legend that acquired traits were passed on to subsequent generations. Thus, natural selection fell out of favour as an evolutionary mechanism.

Neo-Darwinism and Mutations

In order to find a solution, Darwinists advanced the "Modern Synthetic Theory," or as it is more commonly known, Neo-Darwinism, at the end of the 1930's. Neo-Darwinism added mutations, which are distortions formed in the genes of living beings due to such external factors as radiation or replication errors, as the "cause of favourable variations" in addition to natural mutation.

Today, the model that stands for evolution in the world is Neo-Darwinism. The theory maintains that millions of living beings formed as a result of a process whereby numerous complex organs of these organisms (e.g., ears, eyes, lungs, and wings) underwent "mutations," that is, genetic disorders. Yet, there is an outright scientific fact that totally undermines this theory: Mutations do not cause living beings to develop; on the contrary, they are always harmful.

The reason for this is very simple: DNA has a very complex structure, and random effects can only harm it. The American geneticist B.G. Ranganathan explains this as follows:

First, genuine mutations are very rare in nature. Secondly, most muta-

tions are harmful since they are random, rather than orderly changes in the structure of genes; any random change in a highly ordered system will be for the worse, not for the better. For example, if an earthquake were to shake a highly ordered structure such as a building, there would be a random change in the framework of the building which, in all probability, would not be an improvement.[312]

Not surprisingly, no mutation example, which is useful, that is, which is observed to develop the genetic code, has been observed so far. All mutations have proved to be harmful. It was understood that mutation, which is presented as an "evolutionary mechanism," is actually a genetic occurrence that harms living things, and leaves them disabled. (The most common effect of mutation on human beings is cancer.) Of course, a destructive mechanism cannot be an "evolutionary mechanism." Natural selection, on the other hand, "can do nothing by itself," as Darwin also accepted. This fact shows us that there is no "evolutionary mechanism" in nature. Since no evolutionary mechanism exists, no such any imaginary process called "evolution" could have taken place.





Accidental mutations develop into defects in humans as well as other living beings. The Chernobyl disaster is an eye-opener for the effects of mutations.

The Fossil Record: No Sign of Intermediate Forms

The clearest evidence that the scenario suggested by the theory of evolution did not take place is the fossil record.

According to this theory, every living species has sprung from a predecessor. A previously existing species turned into something else over time and all species have come into being in this way. In other words, this transformation proceeds gradually over millions of years.

Had this been the case, numerous intermediary species should have existed and lived within this long transformation period.

For instance, some half-fish/half-reptiles should have lived in the past which had acquired some reptilian traits in addition to the fish traits they already had. Or there should have existed some reptile-birds, which acquired some bird traits in addition to the reptilian traits they already had. Since these would be in a transitional phase, they should be disabled, defective, crippled living beings. Evolutionists refer to these imaginary creatures, which they believe to have lived in the past, as "transitional forms."

If such animals ever really existed, there should be millions and even billions of them in number and variety. More importantly, the remains of these strange creatures should be present in the fossil record. In ***The Origin of Species***, Darwin explained:

> If my theory be true, numberless intermediate varieties, linking most closely all of the species of the same group together must assuredly have existed... Consequently, evidence of their former existence could be found only amongst fossil remains.[313]

Darwin's Hopes Shattered

However, although evolutionists have been making strenuous efforts to find fossils since the middle of the nineteenth century all over the world, no transitional forms have yet been uncovered. All of the fossils, contrary to the evolutionists' expectations, show that life appeared on Earth all of a sudden and fully-formed.

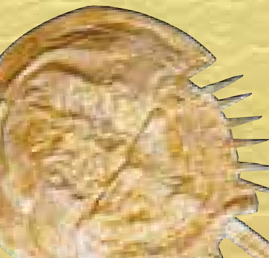
LIVING FOSSILS REFUTE THE THEORY OF EVOLUTION





100-150 million-year-old starfish fossil (L. Cretaceous Age)





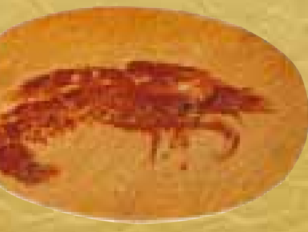
450-million-year-old horseshoe crab fossil from the Ordovician Age





150-200 million-year-old dragon fly fossil (Jurassic-Recent)





100-150 million-year-old shrimp fossil (L. Cretaceous Age)

Different groups of living things suddenly emerged with no similar ancestors behind them, and remained static for millions of years, undergoing no changes at all.

One famous British palaeontologist, Derek V. Ager, admits this fact, even though he is an evolutionist:

> The point emerges that if we examine the fossil record in detail, whether at the level of orders or of species, we find-over and over again-not gradual evolution, but the sudden explosion of one group at the expense of another.[314]

This means that in the fossil record, all living species suddenly emerge as fully formed, without any intermediate forms in between. This is just the opposite of Darwin's assumptions. Also, this is very strong evidence that all living things are created. The only explanation of a living species emerging suddenly and complete in every detail without any evolutionary ancestor is that it was created. This fact is admitted also by the widely known evolutionist biologist Douglas Futuyma:

> Creation and evolution, between them, exhaust the possible explanations for the origin of living things. Organisms either appeared on the earth fully developed or they did not. If they did not, they must have developed from pre-existing species by some process of modification. If they did appear in a fully developed state, they must indeed have been created by some omnipotent intelligence.[315]

Fossils show that living beings emerged fully developed and in a perfect state on the Earth. That means that "the origin of species," contrary to Darwin's supposition, is not evolution, but creation.

The Tale of Human Evolution

The subject most often brought up by advocates of the theory of evolution is the subject of the origin of man. The Darwinist claim holds that modern man evolved from ape-like creatures. During this alleged evolutionary process, which is supposed to have started 4-5 million years ago, some "transitional forms" between modern man and his ancestors are supposed to have existed. According to this completely imaginary scenario, four basic "categories" are listed:

1. *Australopithecus*
2. *Homo habilis*
3. *Homo erectus*
4. *Homo sapiens*

Evolutionists call man's so-called first ape-like ancestors *Australopithecus*, which means "South African ape." These living beings are actually nothing but an old ape species that has become extinct. Extensive research done on various *Australopithecus* specimens by two world famous anatomists from England and the USA, namely, Lord Solly Zuckerman and Prof. Charles Oxnard, shows that these apes belonged to an ordinary ape species that became extinct and bore no resemblance to humans.[316]

Evolutionists classify the next stage of human evolution as "homo," that is "man." According to their claim, the living beings in the *Homo* series are more developed than *Australopithecus*. Evolutionists devise a fanciful evolution scheme by arranging different fossils of these creatures in a particular order. This scheme is imaginary because it has never been proved that there is an evolutionary relation between these different classes. Ernst Mayr, one of the twentieth century's most important evolutionists, contends in his book *One Long Argument* that "particularly historical [puzzles] such as the origin of life or of *Homo sapiens*, are extremely difficult and may even resist a final, satisfying explanation."[317]

By outlining the link chain as *Australopithecus* > *Homo habilis* > *Homo erectus* > *Homo sapiens*, evolutionists imply that each of these species is one another's ancestor. However, recent findings of paleoanthropologists have revealed that *Australopithecus*, *Homo habilis*, and *Homo erectus* lived at different parts of the world at the same time.[318]

Moreover, a certain segment of humans classified as Homo erectus have lived up until very modern times. *Homo sapiens neandarthalensis* and *Homo sapiens sapiens* (modern man) co-existed in the same region.[319]

This situation apparently indicates the invalidity of the claim that

they are ancestors of one another. A palaeontologist from Harvard University, Stephen Jay Gould, explains this deadlock of the theory of evolution, although he is an evolutionist himself:

What has become of our ladder if there are three coexisting lineages of hominids (*A. africanus*, the robust australopithecines, and *H. habilis*), none clearly derived from another? Moreover, none of the three display any evolutionary trends during their tenure on earth.[320]

Put briefly, the scenario of human evolution, which is "upheld" with the help of various drawings of some "half ape, half human" creatures appearing in the media and course books, that is, frankly, by means of propaganda, is nothing but a tale with no scientific foundation.

Lord Solly Zuckerman, one of the most famous and respected scientists in the U.K., who carried out research on this subject for years and studied *Australopithecus* fossils for 15 years, finally concluded, despite being an evolutionist himself, that there is, in fact, no such family tree branching out from ape-like creatures to man.



Stephen Jay Gould

FALSE

Evolutionist newspapers and magazines often print pictures of primitive man. The only available source for these pictures is the imagination of the artist. Evolutionary theory has been so dented by scientific data that today we see less and less of it in the serious press.

Zuckerman also made an interesting "spectrum of science" ranging from those he considered scientific to those he considered unscientific. According to Zuckerman's spectrum, the most "scientific"-that is, depending on concrete data-fields of science are chemistry and physics. After them come the biological sciences and then the social sciences. At the far end of the spectrum, which is the part considered to be most "unscientific," are "extra-sensory perception"-concepts such as telepathy and sixth sense-and finally "human evolution." Zuckerman explains his reasoning:

> We then move right off the register of objective truth into those fields of presumed biological science, like extrasensory perception or the interpretation of man's fossil history, where to the faithful [evolutionist] anything is possible-and where the ardent believer [in evolution] is sometimes able to believe several contradictory things at the same time.[321]

The tale of human evolution boils down to nothing but the prejudiced interpretations of some fossils unearthed by certain people, who blindly adhere to their theory.

Darwinian Formula!

Besides all the technical evidence we have dealt with so far, let us now for once, examine what kind of a superstition the evolutionists have with an example so simple as to be understood even by children:

The theory of evolution asserts that life is formed by chance. According to this claim, lifeless and unconscious atoms came together to form the cell and then they somehow formed other living things, including man. Let us think about that. When we bring together the elements that are the building-blocks of life such as carbon, phosphorus, nitrogen and potassium, only a heap is formed. No matter what treatments it undergoes, this atomic heap cannot form even a single living being. If you like, let us formulate an "experiment" on this subject and let us examine on the behalf of evolutionists what they really claim without pronouncing loudly under the name "Darwinian formula":

Let evolutionists put plenty of materials present in the composition of living things such as phosphorus, nitrogen, carbon, oxygen, iron, and magnesium into big barrels. Moreover, let them add in these barrels any material that does not exist under normal conditions, but they think as necessary. Let them add in this mixture as many amino acids-which have no possibility of forming under natural conditions-and as many proteins-a single one of which has a formation probability of 10^{-950}-as they like. Let them expose these mixtures to as much heat and moisture as they like. Let them stir these with whatever technologically developed device they like. Let them put the foremost scientists beside these barrels. Let these experts wait in turn beside these barrels for billions, and even trillions of years. Let them be free to use all kinds of conditions they believe to be necessary for a human's formation. No matter what they do, they cannot produce from these barrels a human, say a professor that examines his cell structure under the electron microscope. They cannot produce giraffes, lions, bees, canaries, horses, dolphins, roses, orchids, lilies, carnations, bananas, oranges, apples, dates, tomatoes, melons, watermelons, figs, olives, grapes, peaches,



peafowls, pheasants, multicoloured butterflies, or millions of other living beings such as these. Indeed, they could not obtain even a single cell of any one of them.

Briefly, unconscious atoms cannot form the cell by coming together. They cannot take a new decision and divide this cell into two, then take other decisions and create the professors who first invent the electron microscope and then examine their own cell structure under that microscope. Matter is an unconscious, lifeless heap, and it comes to life with Allah's superior creation.

The theory of evolution, which claims the opposite, is a total fallacy completely contrary to reason. Thinking even a little bit on the claims of evolutionists discloses this reality, just as in the above example.

Technology in the Eye and the Ear

Another subject that remains unanswered by evolutionary theory is the excellent quality of perception in the eye and the ear.

Before passing on to the subject of the eye, let us briefly answer the question of how we see. Light rays coming from an object fall oppositely on the eye's retina. Here, these light rays are transmitted into electric signals by cells and reach a tiny spot at the back of the brain, the "centre of vision." These electric signals are perceived in this centre as an image after a series of processes. With this technical background, let us do some thinking.

The brain is insulated from light. That means that its inside is completely dark, and that no light reaches the place where it is located. Thus, the "centre of vision" is never touched by light and may even be the darkest place you have ever known. However, you observe a luminous, bright world in this pitch darkness.

The image formed in the eye is so sharp and distinct that even the technology of the twentieth century has not been able to attain it. For instance, look at the book you are reading, your hands with which you



Compared to cameras and sound recording machines, the eye and ear are much more complex, much more successful and possess far superior designs to these products of high technology.

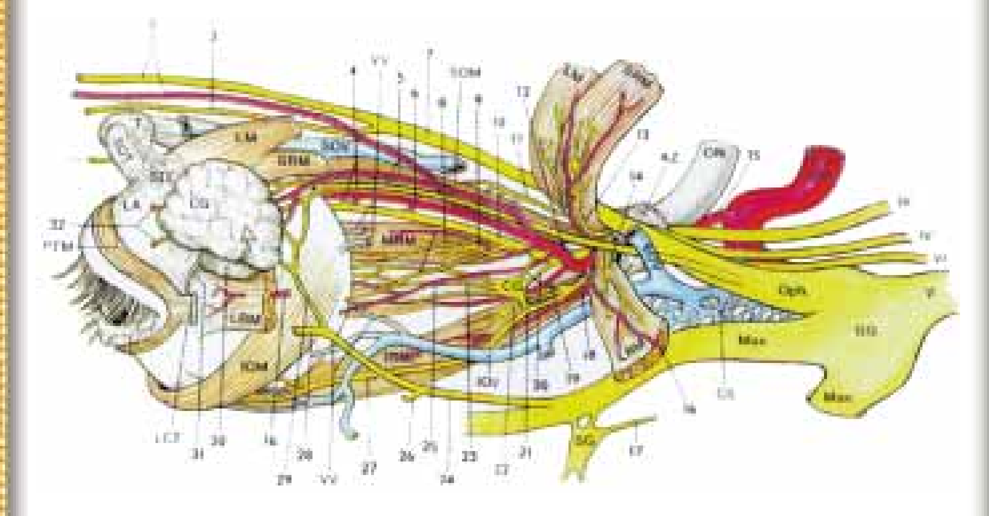
are holding it, and then lift your head and look around you. Have you ever seen such a sharp and distinct image as this one at any other place? Even the most developed television screen produced by the greatest television producer in the world cannot provide such a sharp image for you. This is a three-dimensional, coloured, and extremely sharp image. For more than 100 years, thousands of engineers have been trying to achieve this sharpness. Factories, huge premises were established, much research has been done, plans and designs have been made for this purpose. Again, look at a TV screen and the book you hold in your hands. You will see that there is a big difference in sharpness and distinction. Moreover, the TV screen shows you a two-dimensional image, whereas with your eyes, you watch a three-dimensional perspective with depth.

For many years, tens of thousands of engineers have tried to make a three-dimensional TV and achieve the vision quality of the eye. Yes, they have made a three-dimensional television system, but it is not possible to watch it without putting on special 3-D glasses; moreover, it is only an artificial three-dimension. The background is more blurred, the foreground appears like a paper setting. Never has it been possible to produce a sharp and distinct vision like that of the eye. In both the camera and the television, there is a loss of image quality.

Evolutionists claim that the mechanism producing this sharp and distinct image has been formed by chance. Now, if somebody told you that the television in your room was formed as a result of chance, that all of its atoms just happened to come together and make up this device that produces an image, what would you think? How can atoms do what thousands of people cannot?

If a device producing a more primitive image than the eye could not have been formed by chance, then it is very evident that the eye and the image seen by the eye could not have been formed by chance. The same situation applies to the ear. The outer ear picks up the available sounds by the auricle and directs them to the middle ear, the middle ear transmits the sound vibrations by intensifying them, and the inner ear sends these vibrations to the brain by translating them into electric signals. Just as with the eye, the act of hearing finalizes in the centre of hearing in the brain.

The situation in the eye is also true for the ear. That is, the brain is insulated from sound just as it is from light. It does not let any sound



Darwin did not even want to think about the eye. It is impossible for the eye to happen by coincidence because the eye is perfect and yet so complex. It is the obvious truth that Allah has created the eye.

in. Therefore, no matter how noisy is the outside, the inside of the brain is completely silent. Nevertheless, the sharpest sounds are perceived in the brain. In your completely silent brain, you listen to symphonies, and hear all of the noises in a crowded place. However, were the sound level in your brain was measured by a precise device at that moment, complete silence would be found to be prevailing there.

As is the case with imagery, decades of effort have been spent in trying to generate and reproduce sound that is faithful to the original. The results of these efforts are sound recorders, high-fidelity systems, and systems for sensing sound. Despite all of this technology and the thousands of engineers and experts who have been working on this endeavour, no sound has yet been obtained that has the same sharpness and clarity as the sound perceived by the ear. Think of the highest-quality hi-fi systems produced by the largest company in the music industry. Even in these devices, when sound is recorded some of it is lost; or when you turn on a hi-fi you always hear a hissing sound before the music starts. However, the sounds that are the products of the human body's technology are extremely sharp and clear. A human ear never perceives a sound accompanied by a hissing sound or with atmospherics as does a hi-fi; rather, it perceives sound exactly as it is, sharp and clear. This is the way it has been since the creation of man.





We live our whole life in our brains. People we see, flowers we smell, music we hear, fruit we taste, the moisture we feel with our hands-all these are impressions that become "reality" in the brain. But no colours, voices or pictures exist there. We live in an environment of electrical impulses. This is no theory, but the scientific explanation of how we perceive the outside world.

So far, no man-made visual or recording apparatus has been as sensitive and successful in perceiving sensory data as are the eye and the ear. However, as far as seeing and hearing are concerned, a far greater truth lies beyond all this.

To Whom Does the Consciousness that Sees and Hears Within the Brain Belong?

Who watches an alluring world in the brain, listens to symphonies and the twittering of birds, and smells the rose?

The stimulations coming from a person's eyes, ears, and nose travel to the brain as electro-chemical nerve impulses. In biology, physiology, and biochemistry books, you can find many details about how this image forms in the brain. However, you will never come across the most important fact: Who perceives these electro-chemical nerve impulses as images, sounds, odours, and sensory events in the brain?

There is a consciousness in the brain that perceives all this without feeling any need for an eye, an ear, and a nose. To whom does this consciousness belong? Of course it does not belong to the nerves, the fat layer, and neurons comprising the brain. This is why Darwinist-materialists, who believe that everything is comprised of matter, cannot answer these questions.

For this consciousness is the spirit created by Allah, which needs neither the eye to watch the images nor the ear to hear the sounds. Furthermore, it does not need the brain to think.

Everyone who reads this explicit and scientific fact should ponder on Almighty Allah, and fear and seek refuge in Him, for He squeezes the entire universe in a pitch-dark place of a few cubic centimetres in a three-dimensional, coloured, shadowy, and luminous form.

A Materialist Faith

The information we have presented so far shows us that the theory of evolution is a incompatible with scientific findings. The theory's claim regarding the origin of life is inconsistent with science, the evolutionary mechanisms it proposes have no evolutionary power, and fossils demonstrate that the required intermediate forms have never existed. So, it certainly follows that the theory of evolution should be pushed aside as an unscientific idea. This is how many ideas, such as the Earth-centred universe model, have been taken out of the agenda of science throughout history.

However, the theory of evolution is kept on the agenda of science. Some people even try to represent criticisms directed against it as an "attack on science." Why?

The reason is that this theory is an indispensable dogmatic belief for some circles. These circles are blindly devoted to materialist philosophy and adopt Darwinism because it is the only materialist explanation that can be put forward to explain the workings of nature.



Richard C. Lewontin

Interestingly enough, they also confess this fact from time to time. A well-known geneticist and an outspoken evolutionist, Richard C. Lewontin from Harvard University, confesses that he is "first and foremost a materialist and then a scientist":

> It is not that the methods and institutions of science somehow compel us accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, so we cannot allow a Divine Foot in the door.[322]

These are explicit statements that Darwinism is a dogma kept alive just for the sake of adherence to materialism. This dogma maintains that there is no being save matter. Therefore, it argues that inanimate, unconscious matter created life. It insists that millions of different living species (e.g., birds, fish, giraffes, tigers, insects, trees, flowers, whales, and human beings) originated as a result of the interactions between matter such as pouring rain, lightning flashes, and so on, out of inanimate matter. This is a precept contrary both to reason and science. Yet Darwinists continue to defend it just so as "not to allow a Divine Foot in the door."

Anyone who does not look at the origin of living beings with a materialist prejudice will see this evident truth: All living beings are works of a Creator, Who is All-Powerful, All-Wise, and All-Knowing. This Creator is Allah, Who created the whole universe from non-existence, designed it in the most perfect form, and fashioned all living beings.

The Theory of Evolution: The Most Potent Spell in the World

Anyone free of prejudice and the influence of any particular ideology, who uses only his or her reason and logic, will clearly understand that belief in the theory of evolution, which brings to mind the superstitions of societies with no knowledge of science or civilization, is quite impossible.

As explained above, those who believe in the theory of evolution think that a few atoms and molecules thrown into a huge vat could produce thinking, reasoning professors and university students; such scientists as Einstein and Galileo; such artists as Humphrey Bogart, Frank Sinatra and Luciano Pavarotti; as well as antelopes, lemon trees, and carnations. Moreover, as the scientists and professors who believe in this nonsense are educated people, it is quite justifiable to speak of this theory as "the most potent spell in history." Never before has any other belief or idea so taken away peoples' powers of reason, refused to allow them to think intelligently and logically and hidden the truth from them as if they had been blindfolded. This is an even worse and unbelievable blindness than the Egyptians worshipping the Sun God Ra, totem worship in some parts of Africa, the people of Saba worshipping the Sun, the tribe of Prophet Ibrahim (as) worshipping idols they had made with their own hands, or the people of Prophet Musa (as) worshipping the Golden Calf.

In fact, Allah has pointed to this lack of reason in the Qur'an. In many verse, He reveals in many verses that some peoples' minds will be closed and that they will be powerless to see the truth.

Some of these verses are as follows:

As for those who do not believe, it makes no difference to them whether you warn them or do not warn them,

they will not believe. Allah has sealed up their hearts and hearing and over their eyes is a blindfold. They will have a terrible punishment. (Qur'an, 2: 6-7)

… They have hearts with which they do not understand. They have eyes with which they do not see. They have ears with which they do not hear. Such people are like cattle. No, they are even further astray! They are the unaware. (Qur'an, 7: 179)

Even if We opened up to them a door into heaven, and they spent the day ascending through it, they would only say: "Our eyesight is befuddled! Or rather we have been put under a spell!" (Qur'an, 15: 14-15)

Words cannot express just how astonishing it is that this spell should hold such a wide community in thrall, keep people from the truth, and not be broken for 150 years. It is understandable that one or a few people might believe in impossible scenarios and claims full of stupidity and illogicality. However, "magic" is the only possible explanation for people from all over the world believing that unconscious and lifeless atoms suddenly decided to come together and form a universe that functions with a flawless system of organization, discipline, reason, and consciousness; a planet named Earth with all of its features so perfectly suited to life; and living things full of countless complex systems.

In fact, the Qur'an relates the incident of Prophet Musa (as) and Pharaoh to show that some people who support atheistic philosophies actually influence others by magic. When Pharaoh was told about the true religion, he told Prophet Musa (as) to meet with his own magicians. When Musa (as) did so, he told them to demonstrate their abilities first. The verses continue:

He said: "You throw." And when they threw, they cast a spell on the people's eyes and caused them to feel great fear of them. They produced an extremely powerful magic. (Qur'an, 7: 116)

As we have seen, Pharaoh's magicians were able to deceive everyone, apart from Musa (as) and those who believed in him. However, his evidence broke the spell, or "swallowed up what they had forged," as the verse puts it.

> **We revealed to Musa, "Throw down your staff." And it immediately swallowed up what they had forged. So the Truth took place and what they did was shown to be false. (Qur'an, 7: 117-118)**

As we can see, when people realized that a spell had been cast upon them and that what they saw was just an illusion, Pharaoh's magicians lost all credibility. In the present day too, unless those who, under the influence of a similar spell, believe in these ridiculous claims under their scientific disguise and spend their lives defending them, abandon their superstitious beliefs, they also will be humiliated when the full truth emerges and the spell is broken. In fact, world-renowned British writer and philosopher Malcolm Muggeridge also stated this:

> I myself am convinced that the theory of evolution, especially the extent to which it's been applied, will be one of the great jokes in the history books in the future. Posterity will marvel that so very flimsy and dubious an hypothesis could be accepted with the incredible credulity that it has.[323]

That future is not far off: On the contrary, people will soon see that "chance" is not a deity, and will look back on the theory of evolution as the worst deceit and the most terrible spell in the world. That spell is already rapidly beginning to be lifted from the shoulders of people all over the world. Many people who see its true face are wondering with amazement how they could ever have been taken in by it.

They said, "Glory be to You! We have no knowledge except what You have taught us. You are the All-Knowing, the All-Wise."

(Qur'an, 2:32)

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